

# SEQUENCE LISTING

<110> Axel, Richard  
Scott, Kristin

<120> Chemosensory Gene Family Encoding Gustatory And Olfactory Receptors  
And Uses Thereof

<130> 0575/64019-A/JPW/ADM

<150> 60/271,319

<151> 2001-02-23

<160> 116

<170> PatentIn version 3.1

<210> 1

<211> 410

<212> PRT

<213> Drosophila melanogaster

<400> 1

Met Asp Thr Leu Arg Ala Leu Glu Pro Leu His Arg Ala Cys Gln Val  
1 5 10 15

Cys Asn Leu Trp Pro Trp Arg Leu Ala Pro Pro Pro Asp Ser Glu Gly  
20 25 30

Ile Leu Leu Arg Arg Ser Arg Trp Leu Glu Leu Tyr Gly Trp Thr Val  
35 40 45

Leu Ile Ala Ala Thr Ser Phe Thr Val Tyr Gly Leu Phe Gln Glu Ser  
50 55 60

Ser Val Glu Glu Lys Gln Asp Ser Glu Ser Thr Ile Ser Ser Ile Gly  
65 70 75 80

His Thr Val Asp Phe Ile Gln Leu Val Gly Met Arg Val Ala His Leu  
85 90 95

Ala Ala Leu Leu Glu Ala Leu Trp Gln Arg Gln Ala Gln Arg Gly Phe  
100 105 110

Phe Ala Glu Leu Gly Glu Ile Asp Arg Leu Leu Ser Lys Ala Leu Arg  
115 120 125

Val Asp Val Glu Ala Met Arg Ile Asn Met Arg Arg Gln Thr Ser Arg  
130 135 140

Arg Ala Val Trp Ile Leu Trp Gly Tyr Ala Val Ser Gln Leu Leu Ile

[illegible]

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Ser Thr Ile Gly Ser Asp Ser Asn Gly Gln  
405 410

<210> 2  
<211> 385  
<212> PRT  
<213> Drosophila melanogaster

<400> 2

Met Ser Gly His Leu Gly Arg Val Leu Gln Phe His Leu Arg Leu Tyr  
1 5 10 15

Gln Val Leu Gly Phe His Gly Leu Pro Leu Pro Gly Asp Gly Asn Pro  
20 25 30

Ala Arg Thr Arg Arg Arg Leu Met Ala Trp Ser Leu Phe Leu Leu Ile  
35 40 45

Ser Leu Ser Ala Leu Val Leu Ala Cys Leu Phe Ser Gly Glu Glu Phe  
50 55 60

Leu Tyr Arg Gly Asp Met Phe Gly Cys Ala Asn Asp Ala Leu Lys Tyr  
65 70 75 80

Val Phe Ala Glu Leu Gly Val Leu Ala Ile Tyr Leu Glu Thr Leu Ser  
85 90 95

Ser Gln Arg His Leu Ala Asn Phe Trp Trp Leu His Phe Lys Leu Gly  
100 105 110

Gly Gln Lys Thr Gly Leu Val Ser Leu Arg Ser Glu Phe Gln Gln Phe  
115 120 125

Cys Arg Tyr Leu Ile Phe Leu Tyr Ala Met Met Ala Ala Glu Val Ala  
130 135 140

Ile His Leu Gly Leu Trp Gln Phe Gln Ala Leu Thr Gln His Met Leu  
145 150 155 160

Leu Phe Trp Ser Thr Tyr Glu Pro Leu Val Trp Leu Thr Tyr Leu Arg  
165 170 175

Asn Leu Gln Phe Val Leu His Leu Glu Leu Leu Arg Glu Gln Leu Thr  
180 185 190

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Gly Leu Glu Arg Glu Met Gly Leu Leu Ala Glu Tyr Ser Arg Phe Ala  
195 200 205

Ser Glu Thr Gly Arg Ser Phe Pro Gly Phe Glu Ser Phe Leu Arg Arg  
210 215 220

Arg Leu Val Gln Lys Gln Arg Ile Tyr Ser His Val Tyr Asp Met Leu  
225 230 235 240

Lys Cys Phe Gln Gly Ala Phe Asn Phe Ser Ile Leu Ala Val Leu Leu  
245 250 255

Thr Ile Asn Ile Arg Ile Ala Val Asp Cys Tyr Phe Met Tyr Tyr Ser  
260 265 270

Ile Tyr Asn Asn Val Ile Asn Asn Asp Tyr Tyr Leu Ile Val Pro Ala  
275 280 285

Leu Leu Glu Ile Pro Ala Phe Ile Tyr Ala Ser Gln Ser Cys Met Val  
290 295 300

Val Val Pro Arg Ile Ala His Gln Leu His Asn Ile Val Thr Asp Ser  
305 310 315 320

Gly Cys Cys Ser Cys Pro Asp Leu Ser Leu Gln Ile Gln Asn Phe Ser  
325 330 335

Leu Gln Leu Leu His Gln Pro Ile Arg Ile Asp Cys Leu Gly Leu Thr  
340 345 350

Ile Leu Asp Cys Ser Leu Leu Thr Arg Met Ala Cys Ser Val Gly Thr  
355 360 365

Tyr Met Ile Tyr Ser Ile Gln Phe Ile Pro Lys Phe Ser Asn Thr Tyr  
370 375 380

Met  
385

<210> 3  
<211> 381  
<212> PRT  
<213> Drosophila melanogaster

<400> 3

Met Gln Arg Thr His Leu Glu Phe Glu Phe Lys Asn Ala Pro Gln Glu  
1 5 10 15

Pro Lys Arg Pro Phe Glu Phe Phe Met Tyr Phe Lys Phe Cys Leu Ile  
20 25 30

Asn Leu Met Met Met Ile Gln Val Cys Gly Ile Phe Ala Gln Tyr Gly  
35 40 45

Glu Val Gly Lys Gly Ser Val Ser Gln Val Arg Val His Phe Ala Ile  
50 55 60

Tyr Ala Phe Val Leu Trp Asn Tyr Thr Glu Asn Met Ala Asp Tyr Cys  
65 70 75 80

Tyr Phe Ile Asn Gly Ser Val Leu Lys Tyr Tyr Arg Gln Phe Asn Leu  
85 90 95

Gln Leu Gly Ser Leu Arg Asp Glu Met Asp Gly Leu Arg Pro Gly Gly  
100 105 110

Met Leu Leu His His Cys Cys Glu Leu Ser Asp Arg Leu Glu Glu Leu  
115 120 125

Arg Arg Arg Cys Arg Glu Ile His Asp Leu Gln Arg Glu Ser Phe Arg  
130 135 140

Met His Gln Phe Gln Leu Ile Gly Leu Met Leu Ser Thr Leu Ile Asn  
145 150 155 160

Asn Leu Thr Asn Phe Tyr Thr Leu Phe His Met Leu Ala Lys Gln Ser  
165 170 175

Leu Glu Glu Val Ser Tyr Pro Val Val Val Gly Ser Val Tyr Ala Thr  
180 185 190

Gly Phe Tyr Ile Asp Thr Tyr Ile Val Ala Leu Ile Asn Glu His Ile  
195 200 205

Lys Leu Glu Leu Glu Ala Val Ala Leu Thr Met Arg Arg Phe Ala Glu  
210 215 220

Pro Arg Glu Met Asp Glu Arg Leu Thr Arg Glu Val Arg Asn Lys Ile  
225 230 235 240

Phe Ser Phe Leu Ala Thr Thr Leu Glu Ile Met Ile Gln Ile Trp Leu  
245 250 255

Ser Phe Phe Ala Asn Phe Asp Asp Val Thr Pro Tyr Arg Lys Cys Glu  
260 265 270

Asn Arg Pro Lys Asn Leu Phe Phe Lys Ile Arg Gln Lys Val Ile Gly  
275 280 285

Ile Val Ser Ser Gly Lys Leu Lys Leu Leu Val Ser Leu Arg Phe Phe  
290 295 300

Ile Ile Asp Asn Arg Leu Ile Leu Asn Leu His Lys Tyr Leu Ala Ile  
305 310 315 320

Lys Leu Asn Phe Leu Asn Leu Ile Gln Ile Glu His Leu Ser Leu Glu  
325 330 335

Leu Leu Asn Tyr Gln Pro Pro Met Leu Cys Gly Leu Leu His Leu Asp  
340 345 350

Arg Arg Leu Val Tyr Leu Ile Ala Val Thr Ala Phe Ser Tyr Phe Ile  
355 360 365

Thr Leu Val Gln Phe Asp Leu Tyr Leu Arg Lys Lys Ser  
370 375 380

<210> 4  
<211> 373  
<212> PRT  
<213> Drosophila melanogaster

<400> 4

Met Arg Val Gly Lys Leu Cys Arg Leu Ala Leu Arg Phe Trp Met Gly  
1 5 10 15

Leu Ile Leu Val Leu Gly Phe Ser Ser His Tyr Tyr Asn Pro Thr Arg  
20 25 30

Arg Arg Leu Val Tyr Ser Arg Ile Leu Gln Thr Tyr Asp Trp Leu Leu  
35 40 45

Met Val Ile Asn Leu Gly Ala Phe Tyr Leu Tyr Tyr Arg Tyr Ala Met  
50 55 60

Thr Tyr Phe Leu Glu Gly Met Phe Arg Arg Gln Gly Phe Val Asn Gln  
65 70 75 80

Val Ser Thr Cys Asn Val Phe Gln Gln Leu Leu Met Ala Val Thr Gly

Thr Trp Leu His Phe Leu Phe Glu Arg His Val Cys Gln Thr Tyr Asn  
100 105 110

Glu Leu Ser Arg Ile Leu Lys His Asp Leu Lys Leu Lys Glu His Ser  
115 120 125

Arg Phe Tyr Cys Leu Ala Phe Leu Ala Lys Val Tyr Asn Phe Phe His  
130 135 140

Asn Phe Asn Phe Ala Leu Ser Ala Ile Met His Trp Gly Leu Arg Pro  
145 150 155 160

Phe Asn Val Trp Asp Leu Leu Ala Asn Leu Tyr Phe Val Tyr Asn Ser  
165 170 175

Leu Ala Arg Asp Ala Ile Leu Val Ala Tyr Val Leu Leu Leu Leu Asn  
180 185 190

Leu Ser Glu Ala Leu Arg Leu Asn Gly Gln Gln Glu His Asp Thr Tyr  
195 200 205

Ser Asp Leu Met Lys Gln Leu Arg Arg Arg Glu Arg Leu Leu Arg Ile  
210 215 220

Gly Arg Arg Val His Arg Met Phe Ala Trp Leu Val Ala Ile Ala Leu  
225 230 235 240

Ile Tyr Leu Val Phe Phe Asn Thr Ala Thr Ile Tyr Leu Gly Tyr Thr  
245 250 255

Met Phe Ile Gln Lys His Asp Ala Leu Gly Leu Arg Gly Arg Gly Leu  
260 265 270

Lys Met Leu Leu Thr Val Val Ser Phe Leu Val Ile Leu Trp Asp Val  
275 280 285

Val Leu Leu Gln Val Ile Cys Glu Lys Leu Leu Ala Glu Glu Asn Lys  
290 295 300

Ile Cys Asp Cys Pro Glu Asp Val Ala Ser Ser Arg Thr Thr Tyr Arg  
305 310 315 320

Gln Trp Glu Met Ser Ala Leu Arg Arg Ala Ile Thr Arg Ser Ser Pro  
325 330 335

Glu Asn Asn Val Leu Gly Met Phe Arg Met Asp Met Arg Cys Ala Phe  
 340 345 350

Ala Leu Ile Ser Cys Ser Leu Ser Tyr Gly Ile Ile Ile Ile Gln Ile  
 355 360 365

Gly Tyr Ile Pro Gly  
 370

<210> 5  
 <211> 431  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 5

Met Ala Phe Lys Leu Trp Glu Arg Phe Ser Gln Ala Asp Asn Val Phe  
 1 5 10 15

Gln Ala Leu Arg Pro Leu Thr Phe Ile Ser Leu Leu Gly Leu Ala Pro  
 20 25 30

Phe Arg Leu Asn Leu Asn Pro Arg Lys Glu Val Gln Thr Ser Lys Phe  
 35 40 45

Ser Phe Phe Ala Gly Ile Val His Phe Leu Phe Phe Val Leu Cys Phe  
 50 55 60

Gly Ile Ser Val Lys Glu Gly Asp Ser Ile Ile Gly Tyr Phe Phe Gln  
 65 70 75 80

Thr Asn Ile Thr Arg Phe Ser Asp Gly Thr Leu Arg Leu Thr Gly Ile  
 85 90 95

Leu Ala Met Ser Thr Ile Phe Gly Phe Ala Met Phe Lys Arg Gln Arg  
 100 105 110

Leu Val Ser Ile Ile Gln Asn Asn Ile Val Val Asp Glu Ile Phe Val  
 115 120 125

Arg Leu Gly Met Lys Leu Asp Tyr Arg Arg Ile Leu Leu Ser Ser Phe  
 130 135 140

Leu Ile Ser Leu Gly Met Leu Leu Phe Asn Val Ile Tyr Leu Cys Val  
 145 150 155 160



Ser Tyr Ser Leu Leu Val Ser Ala Thr Ile Ser Pro Ser Phe Val Thr  
165 170 175

Phe Thr Thr Phe Ala Leu Pro His Ile Asn Ile Ser Leu Met Val Phe  
180 185 190

Lys Phe Leu Cys Thr Thr Asp Leu Ala Arg Ser Arg Phe Ser Met Leu  
195 200 205

Asn Glu Ile Leu Gln Asp Ile Leu Asp Ala His Ile Glu Gln Leu Ser  
210 215 220

Ala Leu Glu Leu Ser Pro Met His Ser Val Val Asn His Arg Arg Tyr  
225 230 235 240

Ser His Arg Leu Arg Asn Leu Ile Ser Thr Pro Met Lys Arg Tyr Ser  
245 250 255

Val Thr Ser Val Ile Arg Leu Asn Pro Glu Tyr Ala Ile Lys Gln Val  
260 265 270

Ser Asn Ile His Asn Leu Leu Cys Asp Ile Cys Gln Thr Ile Glu Glu  
275 280 285

Tyr Phe Thr Tyr Pro Leu Leu Gly Ile Ile Ala Ile Ser Phe Leu Phe  
290 295 300

Ile Leu Phe Asp Asp Phe Tyr Ile Leu Glu Ala Ile Leu Asn Pro Lys  
305 310 315 320

Arg Leu Asp Val Phe Glu Ala Asp Glu Phe Phe Ala Phe Phe Leu Met  
325 330 335

Gln Leu Ile Trp Tyr Ile Val Ile Ile Val Leu Ile Val Glu Gly Ser  
340 345 350

Ser Arg Thr Ile Leu His Ser Ser Tyr Thr Ala Ala Ile Val His Lys  
355 360 365

Ile Leu Asn Ile Thr Asp Asp Pro Glu Leu Arg Asp Arg Leu Phe Arg  
370 375 380

Leu Ser Leu Gln Leu Ser His Arg Lys Val Leu Phe Thr Ala Ala Gly  
385 390 395 400

Leu Phe Arg Leu Asp Arg Thr Leu Ile Phe Thr Val Asn Phe Leu Gln

Ile Thr Gly Ala Ala Thr Cys Tyr Leu Ile Ile Leu Ile Gln Phe  
 420 425 430

<210> 6  
 <211> 415  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 6

Met Ile Arg Cys Gly Leu Asp Ile Phe Arg Gly Cys Arg Gly Arg Phe  
 1 5 10 15

Arg Tyr Trp Leu Ser Ala Arg Asp Cys Tyr Asp Ser Ile Ser Leu Met  
 20 25 30

Val Ala Ile Ala Phe Ala Leu Gly Ile Thr Pro Phe Leu Val Arg Arg  
 35 40 45

Asn Ala Leu Gly Glu Asn Ser Leu Glu Gln Ser Trp Tyr Gly Phe Leu  
 50 55 60

Asn Ala Ile Phe Arg Trp Leu Leu Leu Ala Tyr Cys Tyr Ser Tyr Ile  
 65 70 75 80

Asn Leu Arg Asn Glu Ser Leu Ile Gly Tyr Phe Met Arg Asn His Val  
 85 90 95

Ser Gln Ile Ser Thr Arg Val His Asp Val Gly Gly Ile Ile Ala Ala  
 100 105 110

Val Phe Thr Phe Ile Leu Pro Leu Leu Arg Lys Tyr Phe Leu Lys  
 115 120 125

Ser Val Lys Asn Met Val Gln Val Asp Thr Gln Leu Glu Arg Leu Arg  
 130 135 140

Ser Pro Val Asn Phe Asn Thr Val Val Gly Gln Val Val Leu Val Ile  
 145 150 155 160

Leu Ala Val Val Leu Leu Asp Thr Val Leu Leu Thr Thr Gly Leu Val  
 165 170 175

Cys Leu Ala Lys Met Glu Val Tyr Ala Ser Trp Gln Leu Thr Phe Ile  
 180 185 190

Phe Val Tyr Glu Leu Leu Ala Ile Ser Ile Thr Ile Cys Met Phe Cys  
195 200 205

Leu Met Thr Arg Thr Val Gln Arg Arg Ile Thr Cys Leu His Lys Phe  
210 215 220

Asp Phe Ala Thr Met Ser Ala Leu Arg Arg Val Arg Lys Tyr Phe Ile  
225 230 235 240

Ser Ser Gln Val Tyr Glu Ala Leu Arg Pro Leu Phe Phe Leu Thr Phe  
245 250 255

Leu Tyr Gly Leu Thr Pro Phe His Val Val Arg Arg Lys Met Gly Glu  
260 265 270

Ser Tyr Leu Lys Met Ser Cys Phe Gly Val Phe Asn Ile Phe Ile Tyr  
275 280 285

Ile Cys Leu Cys Gly Phe Cys Tyr Ile Ser Ser Leu Arg Gln Gly Glu  
290 295 300

Ser Ile Val Gly Tyr Phe Phe Arg Thr Glu Ile Ser Thr Ile Gly Asp  
305 310 315 320

Arg Leu Gln Ile Phe Asn Gly Leu Ile Ala Gly Ala Val Ile Tyr Thr  
325 330 335

Ser Ala Ile Leu Lys Arg Cys Lys Leu Leu Gly Thr Leu Thr Ile Leu  
340 345 350

His Ser Leu Asp Thr Asn Phe Ser Asn Ile Gly Val Arg Val Lys Tyr  
355 360 365

Ser Arg Ile Phe Arg Tyr Ser Leu Leu Val Leu Ile Phe Lys Leu Leu  
370 375 380

Ile Leu Gly Val Tyr Phe Val Gly Val Phe Arg Leu Leu Val Ser Leu  
385 390 395 400

Asp Val Thr Pro Ser Phe Cys Val Cys Met Thr Phe Phe Leu Gln  
405 410 415

<210> 7

<211> 472

<212> PRT

<213> Drosophila melanogaster

<400> 7

Met Lys Arg Lys Ala Val Glu Val Ile Gly Leu Ile Pro Leu Asn Arg  
1 5 10 15

Gln Gln Ser Glu Thr Asn Phe Ile Leu Asp Tyr Ala Met Met Cys Ile  
20 25 30

Val Pro Ile Phe Tyr Val Ala Cys Tyr Leu Leu Ile Asn Leu Ser His  
35 40 45

Ile Ile Gly Leu Cys Leu Leu Asp Ser Cys Asn Ser Val Cys Lys Leu  
50 55 60

Ser Ser His Leu Phe Met His Leu Gly Ala Phe Leu Tyr Leu Thr Ile  
65 70 75 80

Thr Leu Leu Ser Leu Tyr Arg Arg Lys Glu Phe Phe Gln Gln Phe Asp  
85 90 95

Ala Arg Leu Asn Asp Ile Asp Ala Val Ile Gln Lys Cys Gln Arg Val  
100 105 110

Ala Glu Met Asp Lys Val Lys Val Thr Ala Val Lys His Ser Val Ala  
115 120 125

Tyr His Phe Thr Trp Leu Phe Leu Phe Cys Val Phe Thr Phe Ala Leu  
130 135 140

Tyr Tyr Asp Val Arg Ser Leu Tyr Leu Thr Phe Gly Asn Leu Ala Phe  
145 150 155 160

Ile Pro Phe Met Val Ser Ser Phe Pro Tyr Leu Ala Gly Ser Ile Ile  
165 170 175

Gln Gly Glu Phe Ile Tyr His Val Ser Val Ile Ser Gln Arg Phe Glu  
180 185 190

Gln Ile Asn Met Leu Leu Glu Lys Ile Asn Gln Glu Ala Arg His Arg  
195 200 205

His Ala Pro Leu Thr Val Phe Asp Ile Glu Ser Glu Gly Lys Lys Glu  
210 215 220

Arg Lys Thr Val Thr Pro Ile Thr Val Met Asp Gly Arg Thr Thr Thr  
225 230 235 240

Gly Phe Gly Asn Glu Asn Lys Phe Ala Gly Glu Met Lys Arg Gln Glu  
245 250 255

Gly Gln Gln Lys Asn Asp Asp Asp Asp Leu Asp Thr Ser Asn Asp Glu  
260 265 270

Asp Glu Asp Asp Phe Asp Tyr Asp Asn Ala Thr Ile Ala Glu Asn Thr  
275 280 285

Gly Asn Thr Ser Glu Ala Asn Leu Pro Asp Leu Phe Lys Leu His Asp  
290 295 300

Lys Ile Leu Ala Leu Ser Val Ile Thr Asn Gly Glu Phe Gly Pro Gln  
305 310 315 320

Cys Val Pro Tyr Met Ala Ala Cys Phe Val Val Ser Ile Phe Gly Ile  
325 330 335

Phe Leu Glu Thr Lys Val Asn Phe Ile Val Gly Gly Lys Ser Arg Leu  
340 345 350

Leu Asp Tyr Met Thr Tyr Leu Tyr Val Ile Trp Ser Phe Thr Thr Met  
355 360 365

Met Val Ala Tyr Ile Val Leu Arg Leu Cys Cys Asn Ala Asn Asn His  
370 375 380

Ser Lys Gln Ser Ala Met Ile Val His Glu Ile Met Gln Lys Lys Pro  
385 390 395 400

Ala Phe Met Leu Ser Asn Asp Leu Phe Tyr Asn Lys Met Lys Ser Phe  
405 410 415

Thr Leu Gln Phe Leu His Trp Glu Gly Phe Phe Gln Phe Asn Gly Val  
420 425 430

Gly Leu Phe Ala Leu Asp Tyr Thr Phe Ile Phe Ser Thr Val Ser Ala  
435 440 445

Ala Thr Ser Tyr Leu Ile Val Leu Leu Gln Phe Asp Met Thr Ala Ile  
450 455 460

Leu Arg Asn Glu Gly Leu Met Ser  
465 470

<210> 8  
 <211> 390  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 8

Met Val Asp Trp Val Val Leu Leu Leu Lys Ala Val His Ile Tyr Cys  
 1 5 10 15

Tyr Leu Ile Gly Leu Ser Asn Phe Glu Phe Asp Cys Arg Thr Gly Arg  
 20 25 30

Val Phe Lys Ser Arg Arg Cys Thr Ile Tyr Ala Phe Met Ala Asn Ile  
 35 40 45

Phe Ile Leu Ile Thr Ile Ile Tyr Asn Phe Thr Ala His Gly Asp Thr  
 50 55 60

Asn Leu Leu Phe Gln Ser Ala Asn Lys Leu His Glu Tyr Val Ile Ile  
 65 70 75 80

Ile Met Ser Gly Leu Lys Ile Val Ala Leu Ile Thr Val Leu Asn Arg  
 85 90 95

Trp Leu Gln Arg Gly Gln Met Met Gln Leu Val Lys Asp Val Ile Arg  
 100 105 110

Leu Tyr Met Ile Asn Pro Gln Leu Lys Ser Met Ile Arg Trp Gly Ile  
 115 120 125

Leu Leu Lys Ala Phe Ile Ser Phe Ala Ile Glu Leu Leu Gln Val Thr  
 130 135 140

Leu Ser Val Asp Ala Leu Asp Arg Gln Gly Thr Ala Glu Met Met Gly  
 145 150 155 160

Leu Leu Val Lys Leu Cys Val Ser Phe Ile Met Asn Leu Ala Ile Ser  
 165 170 175

Gln His Phe Leu Val Ile Leu Leu Ile Arg Ala Gln Tyr Arg Ile Met  
 180 185 190

Asn Ala Lys Leu Arg Met Val Ile Glu Glu Ser Arg Arg Leu Ser Phe  
 195 200 205

Leu Gln Leu Arg Asn Gly Ala Phe Met Thr Arg Cys Cys Tyr Leu Ser

210

215

220

Asp Gln Leu Glu Asp Ile Gly Glu Val Gln Ser Gln Leu Gln Ser Met  
225 230 235 240

Val Gly Gln Leu Asp Glu Val Phe Gly Met Gln Gly Leu Met Ala Tyr  
245 250 255

Ser Glu Tyr Tyr Leu Ser Ile Val Gly Thr Ser Tyr Met Ser Tyr Ser  
260 265 270

Ile Tyr Lys Tyr Gly Pro His Asn Leu Lys Leu Ser Ala Lys Thr Ser  
275 280 285

Ile Ile Val Cys Ile Leu Ile Thr Leu Phe Tyr Leu Asp Ala Leu Val  
290 295 300

Asn Cys Asn Asn Met Leu Arg Val Leu Asp His His Lys Asp Phe Leu  
305 310 315 320

Gly Leu Leu Glu Glu Arg Thr Val Phe Ala Ser Ser Leu Asp Ile Arg  
325 330 335

Leu Glu Glu Ser Val Ser Phe Glu Ser Leu Gln Leu Gln Leu Ala Arg  
340 345 350

Asn Pro Leu Lys Ile Asn Val Met Gly Met Phe Pro Ile Thr Arg Gly  
355 360 365

Ser Thr Ala Ala Met Cys Ala Ser Val Ile Val Asn Ser Ile Phe Leu  
370 375 380

Ile Gln Phe Asp Met Glu  
385 390

<210> 9  
<211> 344  
<212> PRT  
<213> Drosophila melanogaster

<400> 9

Met Asp Leu Glu Ser Phe Leu Leu Gly Ala Val Tyr Tyr Tyr Gly Leu  
1 5 10 15

Phe Ile Gly Leu Ser Asn Phe Glu Phe Asp Trp Asn Thr Gly Arg Val  
20 25 30

Phe Thr Lys Lys Trp Ser Thr Leu Tyr Ala Ile Ala Leu Asp Ser Cys  
35 40 45

Ile Phe Ala Leu Tyr Ile Tyr His Trp Thr Gly Asn Thr Asn Ile Val  
50 55 60

Asn Ala Ile Phe Gly Arg Ala Asn Met Leu His Glu Tyr Val Val Ala  
65 70 75 80

Ile Leu Thr Gly Leu Arg Ile Val Thr Gly Leu Phe Thr Leu Ile Leu  
85 90 95

Arg Trp Tyr Gln Arg Cys Lys Met Met Asp Leu Ala Ser Lys Val Val  
100 105 110

Arg Met Tyr Val Ala Arg Pro Gln Val Arg Arg Met Ser Arg Trp Gly  
115 120 125

Ile Leu Thr Lys Phe Ile Phe Gly Ser Ile Thr Asp Gly Leu Gln Met  
130 135 140

Ala Met Val Leu Ser Ala Met Gly Ser Arg Val Asp Ser Gln Phe Tyr  
145 150 155 160

Leu Gly Leu Gly Leu Gln Tyr Trp Met Phe Val Ile Leu Asn Met Ala  
165 170 175

Met Met Gln Gln His Met Ile Met Leu Phe Val Arg Thr Gln Phe Gln  
180 185 190

Leu Ile Asn Thr Glu Leu Arg Gln Val Ile Asp Glu Ala Lys Asp Leu  
195 200 205

Leu Leu Ser Pro Arg His Gln Gly Val Phe Met Thr Lys Cys Cys Ser  
210 215 220

Leu Ala Asp Gln Ile Glu Asn Ile Ala Arg Ile Gln Ser Gln Leu Gln  
225 230 235 240

Thr Ile Met Asn Gln Met Glu Glu Val Phe Gly Ile Gln Gly Ala Met  
245 250 255

Thr Tyr Gly Gly Tyr Tyr Leu Ser Ser Val Gly Thr Cys Tyr Leu Ala  
260 265 270



Tyr Ser Ile Leu Lys His Gly Tyr Glu Asn Leu Ser Met Thr Leu Ser  
275 280 285

Thr Val Ile Leu Ala Tyr Ser Trp Cys Phe Phe Tyr Tyr Leu Asp Gly  
290 295 300

Met Leu Asn Leu Ser Val Met Leu His Val Gln Asp Asp Tyr Trp Glu  
305 310 315 320

Met Leu Gln Ile Leu Gly Lys Arg Thr Ile Phe Val Gly Leu Asp Val  
325 330 335

Arg Leu Glu Glu Ala Val Ser Thr  
340

<210> 10

<211> 383

<212> PRT

<213> Drosophila melanogaster

<400> 10

Met Ile Lys Leu Tyr Phe Arg Tyr Ser Leu Ala Ile Gly Ile Thr Ser  
1 5 10 15

Gln Gln Phe Ser Asn Arg Lys Phe Phe Ser Thr Leu Phe Ser Arg Thr  
20 25 30

Tyr Ala Leu Ile Ala Asn Ile Val Thr Leu Ile Met Leu Pro Ile Val  
35 40 45

Met Trp Gln Val Gln Leu Val Phe Gln Gln Lys Lys Thr Phe Pro Lys  
50 55 60

Leu Ile Leu Ile Thr Asn Asn Val Arg Glu Ala Val Ser Phe Leu Val  
65 70 75 80

Ile Leu Tyr Thr Val Leu Ser Arg Gly Phe Arg Asp Thr Ala Phe Lys  
85 90 95

Glu Met Gln Pro Leu Leu Leu Thr Leu Phe Arg Glu Glu Lys Arg Cys  
100 105 110

Gly Phe Lys Gly Ile Gly Gly Val Arg Arg Ser Leu Arg Ile Leu Leu  
115 120 125

Phe Val Lys Phe Phe Thr Leu Ser Trp Leu Cys Val Thr Asp Val Leu  
130 135 140

Phe Leu Leu Tyr Ser Thr Asp Ala Leu Ile Trp Val Asn Val Leu Arg  
145 150 155 160

Phe Phe Phe Lys Cys Asn Thr Asn Asn Ile Leu Glu Met Val Pro Met  
165 170 175

Gly Tyr Phe Leu Ala Leu Trp His Ile Ala Arg Gly Phe Asp Cys Val  
180 185 190

Asn Arg Arg Leu Asp Gln Ile Val Lys Ser Lys Ser Thr Arg Lys His  
195 200 205

Arg Glu Leu Gln His Leu Trp Leu Leu His Ala Cys Leu Thr Lys Thr  
210 215 220

Ala Leu Asn Ile Asn Lys Ile Tyr Ala Pro Gln Met Leu Ala Ser Arg  
225 230 235 240

Phe Asp Asn Phe Val Asn Gly Val Ile Gln Ala Tyr Trp Gly Ala Val  
245 250 255

Phe Thr Phe Asp Leu Ser Thr Pro Phe Phe Trp Val Val Tyr Gly Ser  
260 265 270

Val Gln Tyr His Val Arg Cys Leu Asp Tyr Tyr Leu Ile Asp Asn Met  
275 280 285

Cys Asp Val Ala Val Glu Tyr His Asp Ser Ala Lys His Ser Trp Ser  
290 295 300

Glu Val Arg Trp Thr Lys Glu Val Ser Ala Phe Gly Ser Ile Leu Leu  
305 310 315 320

Tyr Ile Cys Met Leu Met Gln Leu Leu Ser Phe Gln Ile Ser Ser Tyr  
325 330 335

Val Ile Tyr Ala Asn Ser Thr Lys Leu Gln Leu Trp Ser Cys Gly Leu  
340 345 350

Phe Gln Ala Asn Arg Ser Met Trp Phe Ala Met Ile Ser Ser Val Leu  
355 360 365

Tyr Tyr Ile Leu Val Leu Leu Gln Phe His Leu Val Met Arg Lys  
370 375 380

<210> 11  
 <211> 436  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 11

Met Ser Arg Thr Ser Asp Asp Ile Arg Lys His Leu Lys Val Arg Arg  
 1 5 10 15

Gln Lys Gln Arg Ala Ile Leu Ala Met Arg Trp Arg Cys Ala Gln Gly  
 20 25 30

Gly Leu Glu Phe Glu Gln Leu Asp Thr Phe Tyr Gly Ala Ile Arg Pro  
 35 40 45

Tyr Leu Cys Val Ala Gln Phe Phe Gly Ile Met Pro Leu Ser Asn Ile  
 50 55 60

Arg Ser Arg Asp Pro Gln Asp Val Lys Phe Lys Val Arg Ser Ile Gly  
 65 70 75 80

Leu Ala Val Thr Gly Leu Phe Leu Leu Leu Gly Gly Met Lys Thr Leu  
 85 90 95

Val Gly Ala Asn Ile Leu Phe Thr Glu Gly Leu Asn Ala Lys Asn Ile  
 100 105 110

Val Gly Leu Val Phe Leu Ile Val Gly Met Val Asn Trp Leu Asn Phe  
 115 120 125

Val Gly Phe Ala Arg Ser Trp Ser His Ile Met Leu Pro Trp Ser Ser  
 130 135 140

Val Asp Ile Leu Met Leu Phe Pro Pro Tyr Lys Arg Gly Lys Arg Ser  
 145 150 155 160

Leu Arg Ser Lys Val Asn Val Leu Ala Leu Ser Val Val Val Leu Ala  
 165 170 175

Val Gly Asp His Met Leu Tyr Tyr Ala Ser Gly Tyr Cys Ser Tyr Ser  
 180 185 190

Met His Ile Leu Gln Cys His Thr Asn His Ser Arg Ile Thr Phe Gly  
 195 200 205

Leu Tyr Leu Glu Lys Glu Phe Ser Asp Ile Met Phe Ile Met Pro Phe

210

215

220

Asn Ile Phe Ser Met Cys Tyr Gly Phe Trp Leu Asn Gly Ala Phe Thr  
 225 230 235 240

Phe Leu Trp Asn Phe Met Asp Ile Phe Ile Val Met Thr Ser Ile Gly  
 245 250 255

Leu Ala Gln Arg Phe Gln Gln Phe Ala Ala Arg Val Gly Ala Leu Glu  
 260 265 270

Gly Arg His Val Pro Glu Ala Leu Trp Tyr Asp Ile Arg Arg Asp His  
 275 280 285

Ile Arg Leu Cys Glu Leu Ala Ser Leu Val Glu Ala Ser Met Ser Asn  
 290 295 300

Ile Val Phe Val Ser Cys Ala Asn Asn Val Tyr Val Ile Cys Asn Gln  
 305 310 315 320

Ala Leu Ala Ile Phe Thr Lys Leu Arg His Pro Ile Asn Tyr Val Tyr  
 325 330 335

Phe Trp Tyr Ser Leu Ile Phe Leu Leu Ala Arg Thr Ser Leu Val Phe  
 340 345 350

Met Thr Ala Ser Lys Ile His Asp Ala Ser Leu Leu Pro Leu Arg Ser  
 355 360 365

Leu Tyr Leu Val Pro Ser Asp Gly Trp Thr Gln Glu Val Gln Arg Phe  
 370 375 380

Ala Asp Gln Leu Thr Ser Glu Phe Val Gly Leu Ser Gly Tyr Arg Leu  
 385 390 395 400

Phe Cys Leu Thr Arg Lys Ser Leu Phe Gly Met Leu Ala Thr Leu Val  
 405 410 415

Thr Tyr Glu Leu Met Leu Leu Gln Ile Asp Ala Lys Ser His Lys Gly  
 420 425 430

Leu Arg Cys Ala  
 435

<210> 12  
 <211> 512

<212> PRT

<213> Drosophila melanogaster

<400> 12

Met Arg Pro Ser Gly Glu Lys Val Val Lys Gly His Gly Gln Gly Asn  
1 5 10 15

Ser Gly His Ser Leu Ser Gly Met Ala Asn Tyr Tyr Arg Arg Lys Lys  
20 25 30

Gly Asp Ala Val Phe Leu Asn Ala Lys Pro Leu Asn Ser Ala Asn Ala  
35 40 45

Gln Ala Tyr Leu Tyr Gly Val Arg Lys Tyr Ser Ile Gly Leu Ala Glu  
50 55 60

Arg Leu Asp Ala Asp Tyr Glu Ala Pro Pro Leu Asp Arg Lys Lys Ser  
65 70 75 80

Ser Asp Ser Thr Ala Ser Asn Asn Pro Glu Phe Lys Pro Ser Val Phe  
85 90 95

Tyr Arg Asn Ile Asp Pro Ile Asn Trp Phe Leu Arg Ile Ile Gly Val  
100 105 110

Leu Pro Ile Val Arg His Gly Pro Ala Arg Ala Lys Phe Glu Met Asn  
115 120 125

Ser Ala Ser Phe Ile Tyr Ser Val Val Phe Phe Val Leu Leu Ala Cys  
130 135 140

Tyr Val Gly Tyr Val Ala Asn Asn Arg Ile His Ile Val Arg Ser Leu  
145 150 155 160

Ser Gly Pro Phe Glu Glu Ala Val Ile Ala Tyr Leu Phe Leu Val Asn  
165 170 175

Ile Leu Pro Ile Met Ile Ile Pro Ile Leu Trp Tyr Glu Ala Arg Lys  
180 185 190

Ile Ala Lys Leu Phe Asn Asp Trp Asp Asp Phe Glu Val Leu Tyr Tyr  
195 200 205

Gln Ile Ser Gly His Ser Leu Pro Leu Lys Leu Arg Gln Lys Ala Val  
210 215 220

Tyr Ile Ala Ile Val Leu Pro Ile Leu Ser Val Leu Ser Val Val Ile  
225 230 235 240

Thr His Val Thr Met Ser Asp Leu Asn Ile Asn Gln Val Val Pro Tyr  
245 250 255

Cys Ile Leu Asp Asn Leu Thr Ala Met Leu Gly Ala Trp Trp Phe Leu  
260 265 270

Ile Cys Glu Ala Met Ser Ile Thr Ala His Leu Leu Ala Glu Arg Phe  
275 280 285

Gln Lys Ala Leu Lys His Ile Gly Pro Ala Ala Met Val Ala Asp Tyr  
290 295 300

Arg Val Leu Trp Leu Arg Leu Ser Lys Leu Thr Arg Asp Thr Gly Asn  
305 310 315 320

Ala Leu Cys Tyr Thr Phe Val Phe Met Ser Leu Tyr Leu Phe Phe Ile  
325 330 335

Ile Thr Leu Ser Ile Tyr Gly Leu Met Ser Gln Leu Ser Glu Gly Phe  
340 345 350

Gly Ile Lys Asp Ile Gly Leu Thr Ile Thr Ala Leu Trp Asn Ile Gly  
355 360 365

Leu Leu Phe Tyr Ile Cys Asp Glu Ala His Tyr Ala Ser Val Asn Val  
370 375 380

Arg Thr Asn Phe Gln Lys Lys Leu Leu Met Val Glu Leu Asn Trp Met  
385 390 395 400

Asn Ser Asp Ala Gln Thr Glu Ile Asn Met Phe Leu Arg Ala Thr Glu  
405 410 415

Met Asn Pro Ser Thr Ile Asn Cys Gly Gly Phe Phe Asp Val Asn Arg  
420 425 430

Thr Leu Phe Lys Gly Leu Leu Thr Thr Met Val Thr Tyr Leu Val Val  
435 440 445

Leu Leu Gln Phe Gln Ile Ser Ile Pro Thr Asp Lys Gly Asp Ser Glu  
450 455 460

Gly Ala Asn Asn Ile Thr Val Val Asp Phe Val Met Asp Ser Leu Asp

465

470

475

480

Asn Asp Met Ser Leu Met Gly Ala Ser Thr Leu Ser Thr Thr Thr Val  
485 495

Gly Thr Thr Leu Pro Pro Pro Ile Met Lys Leu Lys Gly Arg Lys Gly  
500 505 510

&lt;210&gt; 13

&lt;211&gt; 367

&lt;212&gt; PRT

<213> *Drosophila melanogaster*

&lt;400&gt; 13

Met Pro Val Arg Lys Val Ser Ser Lys Phe Ala Glu Asp Leu Thr Phe  
1 5 10 15

Thr Trp Phe Ser Val Arg Ser Tyr Tyr Ala Leu Val Thr Ile Leu Phe  
20 25 30

Phe Gly Val Ser Ser Gly Tyr Met Val Ala Phe Val Thr Ser Val Ser  
35 40 45

Phe Asn Phe Asp Ser Val Glu Thr Leu Val Phe Tyr Leu Ser Ile Phe  
50 55 60

Leu Ile Ser Leu Ser Phe Phe Gln Leu Ala Arg Lys Trp Pro Glu Ile  
65 70 75 80

Ala Gln Ser Trp Gln Leu Val Glu Ala Lys Leu Pro Pro Leu Lys Leu  
85 90 95

Pro Lys Glu Arg Arg Ser Leu Ala Gln His Ile Asn Met Ile Thr Ile  
100 105 110

Val Ala Thr Thr Cys Ser Leu Val Glu His Ile Met Ser Met Leu Ser  
115 120 125

Met Gly Tyr Tyr Val Asn Ser Cys Pro Arg Trp Pro Asp Arg Pro Ile  
130 135 140

Asp Ser Phe Leu Tyr Leu Ser Phe Ser Ser Val Phe Tyr Phe Val Asp  
145 150 155 160

Tyr Thr Arg Phe Leu Gly Ile Val Gly Lys Val Val Asn Val Leu Ser  
165 170 175

Thr Phe Ala Trp Asn Phe Asn Asp Ile Phe Val Met Ala Val Ser Val  
180 185 190

Ala Leu Ala Ala Arg Phe Arg Gln Leu Asn Asp Tyr Met Met Arg Glu  
195 200 205

Ala Arg Leu Pro Thr Thr Val Asp Tyr Trp Met Gln Cys Arg Ile Asn  
210 215 220

Phe Arg Asn Leu Cys Lys Leu Cys Glu Glu Val Asp Asp Ala Ile Ser  
225 230 235 240

Thr Ile Thr Leu Leu Cys Phe Ser Asn Asn Leu Tyr Phe Ile Cys Gly  
245 250 255

Lys Ile Leu Lys Ser Met Gln Ala Lys Pro Ser Ile Trp His Ala Leu  
260 265 270

Tyr Phe Trp Phe Ser Leu Val Tyr Leu Leu Gly Arg Thr Leu Ile Leu  
275 280 285

Ser Leu Tyr Ser Ser Ser Ile Asn Asp Glu Ser Lys Arg Pro Leu Val  
290 295 300

Ile Phe Arg Leu Val Pro Arg Glu Tyr Trp Cys Asp Glu Leu Lys Arg  
305 310 315 320

Phe Ser Glu Glu Val Gln Met Asp Asn Val Ala Leu Thr Gly Met Lys  
325 330 335

Phe Phe Arg Leu Thr Arg Gly Val Val Ile Ser Val Ala Gly Thr Ile  
340 345 350

Val Thr Tyr Glu Leu Ile Leu Leu Gln Phe Asn Gly Glu Glu Lys  
355 360 365

<210> 14  
<211> 409  
<212> PRT  
<213> Drosophila melanogaster

<400> 14

Met Glu Leu Ser Arg Ser Asp Lys Glu Ala Phe Leu Ser Asp Gly Ser  
1 5 10 15

Phe His Gln Ala Val Gly Arg Val Leu Leu Val Ala Glu Phe Phe Ala



Met Met Pro Val Lys Gly Val Thr Gly Lys His Pro Ser Asp Leu Ser  
35 40 45

Phe Ser Trp Arg Asn Ile Arg Thr Cys Phe Ser Leu Leu Phe Ile Ala  
50 55 60

Ser Ser Leu Ala Asn Phe Gly Leu Ser Leu Phe Lys Val Leu Asn Asn  
65 70 75 80

Pro Ile Ser Phe Asn Ser Ile Lys Pro Ile Ile Phe Arg Gly Ser Val  
85 90 95

Leu Leu Val Leu Ile Val Ala Leu Asn Leu Ala Arg Gln Trp Pro Gln  
100 105 110

Leu Met Met Tyr Trp His Thr Val Glu Lys Asp Leu Pro Gln Tyr Lys  
115 120 125

Thr Gln Leu Thr Lys Trp Lys Met Gly His Thr Ile Ser Met Val Met  
130 135 140

Leu Leu Gly Met Met Leu Ser Phe Ala Glu His Ile Leu Ser Met Val  
145 150 155 160

Ser Ala Ile Asn Tyr Ala Ser Phe Cys Asn Arg Thr Ala Asp Pro Ile  
165 170 175

Gln Asn Tyr Phe Leu Arg Thr Asn Asp Glu Ile Phe Phe Val Thr Ser  
180 185 190

Tyr Ser Thr Thr Leu Ala Leu Trp Gly Lys Phe Gln Asn Val Phe Ser  
195 200 205

Thr Phe Ile Trp Asn Tyr Met Asp Leu Phe Val Met Ile Val Ser Ile  
210 215 220

Gly Leu Ala Ser Lys Phe Arg Gln Leu Asn Asp Asp Leu Arg Asn Phe  
225 230 235 240

Lys Gly Met Asn Met Ala Pro Ser Tyr Trp Ser Glu Arg Arg Ile Gln  
245 250 255

Tyr Arg Asn Ile Cys Ile Leu Cys Asp Lys Met Asp Asp Ala Ile Ser  
260 265 270

Leu Ile Thr Met Val Ser Phe Ser Asn Asn Leu Tyr Phe Ile Cys Val  
275 280 285

Gln Leu Leu Arg Ser Leu Asn Thr Met Pro Ser Val Ala His Ala Val  
290 295 300

Tyr Phe Tyr Phe Ser Leu Ile Phe Leu Ile Gly Arg Thr Leu Ala Val  
305 310 315 320

Ser Leu Tyr Ser Ser Ser Val His Asp Glu Ser Arg Leu Thr Leu Arg  
325 330 335

Tyr Leu Arg Cys Val Pro Lys Glu Ser Trp Cys Pro Glu Val Lys Arg  
340 345 350

Phe Thr Glu Glu Val Ile Ser Asp Glu Val Ala Leu Thr Gly Met Lys  
355 360 365

Phe Phe His Leu Thr Arg Lys Leu Val Leu Ser Val Ala Gly Thr Ile  
370 375 380

Val Thr Tyr Glu Leu Val Leu Ile Gln Phe His Glu Asp Asn Asp Leu  
385 390 395 400

Trp Asp Cys Asp Gln Ser Tyr Tyr Ser  
405

<210> 15  
<211> 498  
<212> PRT  
<213> Drosophila melanogaster  
  
<400> 15

Met Asp Asn Met Ala Gln Ala Glu Asp Ala Val Gln Pro Leu Leu Gln  
1 5 10 15

Gln Phe Gln Gln Leu Phe Phe Ile Ser Lys Ile Ala Gly Ile Leu Pro  
20 25 30

Gln Asp Leu Glu Lys Phe Arg Ser Arg Asn Leu Leu Glu Lys Ser Arg  
35 40 45

Asn Gly Met Ile Tyr Met Leu Ser Thr Leu Ile Leu Tyr Val Val Leu  
50 55 60

Tyr Asn Ile Leu Ile Tyr Ser Phe Gly Glu Glu Asp Arg Ser Leu Lys  
65 70 75 80

Ala Ser Gln Ser Thr Leu Thr Phe Val Ile Gly Leu Phe Leu Thr Tyr  
85 90 95

Ile Gly Leu Ile Met Met Val Ser Asp Gln Leu Thr Ala Leu Arg Asn  
100 105 110

Gln Gly Arg Ile Gly Glu Leu Tyr Glu Arg Ile Arg Leu Val Asp Glu  
115 120 125

Arg Leu Tyr Lys Glu Gly Cys Val Met Asp Asn Ser Thr Ile Gly Arg  
130 135 140

Arg Ile Arg Ile Met Leu Ile Met Thr Val Ile Phe Glu Leu Ser Ile  
145 150 155 160

Leu Val Ser Thr Tyr Val Lys Leu Val Asp Tyr Ser Gln Trp Met Ser  
165 170 175

Leu Leu Trp Ile Val Ser Ala Ile Pro Thr Phe Ile Asn Thr Leu Asp  
180 185 190

Lys Ile Trp Phe Ala Val Ser Leu Tyr Ala Leu Lys Glu Arg Phe Glu  
195 200 205

Ala Ile Asn Ala Thr Leu Glu Glu Leu Val Asp Thr His Glu Lys His  
210 215 220

Lys Leu Trp Leu Arg Gly Asn Gln Glu Val Pro Pro Leu Asp Ser  
225 230 235 240

Ser Gln Pro Pro Gln Tyr Asp Ser Asn Leu Glu Tyr Leu Tyr Lys Glu  
245 250 255

Leu Gly Ala Ile Asp Ala Ala Ser Arg Lys Pro Pro Pro Pro Leu  
260 265 270

Ala Thr Asn Met Val His Glu Ser Glu Leu Gly Asn Ala Ala Lys Val  
275 280 285

Glu Glu Lys Leu Asn Asn Leu Cys Gln Val His Asp Glu Ile Cys Glu  
290 295 300

Ile Gly Lys Ala Leu Asn Glu Leu Trp Ser Tyr Pro Ile Leu Ser Leu

305                      310                      315                      320

Met Ala Tyr Gly Phe Leu Ile Phe Thr Ala Gln Leu Tyr Phe Leu Tyr  
                        325                      330                      335

Cys Ala Thr Gln Tyr Gln Ser Ile Pro Ser Leu Phe Arg Ser Ala Lys  
                        340                      345                      350

Asn Pro Phe Ile Thr Val Ile Val Leu Ser Tyr Thr Ser Gly Lys Cys  
                        355                      360                      365

Val Tyr Leu Ile Tyr Leu Ser Trp Lys Thr Ser Gln Ala Ser Lys Arg  
                        370                      375                      380

Thr Gly Ile Ser Leu His Lys Cys Gly Val Val Ala Asp Asp Asn Leu  
                        385                      390                      395                      400

Leu Tyr Glu Ile Val Asn His Leu Ser Leu Lys Leu Leu Asn His Ser  
                        405                      410                      415

Val Asp Phe Ser Ala Cys Gly Phe Phe Thr Leu Asp Met Glu Thr Leu  
                        420                      425                      430

Tyr Gly Val Ser Gly Gly Ile Thr Ser Tyr Leu Ile Ile Leu Ile Gln  
                        435                      440                      445

Phe Asn Leu Ala Ala Gln Gln Ala Lys Glu Ala Ile Gln Thr Phe Asn  
                        450                      455                      460

Ser Leu Asn Asp Thr Ala Gly Leu Val Gly Ala Ala Thr Asp Met Asp  
                        465                      470                      475                      480

Asn Ile Ser Ser Thr Leu Arg Asp Phe Val Thr Thr Thr Met Thr Pro  
                        485                      490                      495

Ala Val

<210> 16  
<211> 346  
<212> PRT  
<213> Drosophila melanogaster

<400> 16

Met Phe Glu Phe Leu His Gln Met Ser Ala Pro Lys Leu Ser Thr Ser  
1                      5                      10                      15

Ile Leu Arg Tyr Ile Phe Arg Tyr Ala Gln Phe Ile Gly Val Ile Phe  
20 25 30

Phe Cys Leu His Thr Arg Lys Asp Asp Lys Thr Val Phe Ile Arg Asn  
35 40 45

Trp Leu Lys Trp Leu Asn Val Thr His Arg Ile Ile Thr Phe Thr Arg  
50 55 60

Phe Phe Trp Val Tyr Ile Ala Ser Ile Ser Ile Lys Thr Asn Arg Val  
65 70 75 80

Leu Gln Val Leu His Gly Met Arg Leu Val Leu Ser Ile Pro Asn Val  
85 90 95

Ala Val Ile Leu Cys Tyr His Ile Phe Arg Gly Pro Glu Ile Ile Asp  
100 105 110

Leu Ile Asn Gln Phe Leu Arg Leu Phe Arg Gln Val Ser Asp Leu Phe  
115 120 125

Lys Thr Lys Thr Pro Gly Phe Gly Gly Arg Arg Glu Leu Ile Leu Ile  
130 135 140

Leu Leu Asn Leu Ile Ser Phe Ala His Glu Gln Thr Tyr Leu Trp Phe  
145 150 155 160

Thr Ile Arg Lys Gly Phe Ser Trp Arg Phe Leu Ile Asp Trp Trp Cys  
165 170 175

Asp Phe Tyr Leu Val Ser Ala Thr Asn Ile Phe Ile His Ile Asn Ser  
180 185 190

Ile Gly Tyr Leu Ser Leu Gly Val Leu Tyr Ser Glu Leu Asn Lys Tyr  
195 200 205

Val Tyr Thr Asn Leu Arg Ile Gln Leu Gln Lys Leu Asn Thr Ser Gly  
210 215 220

Ser Lys Gln Lys Ile Arg Arg Val Gln Asn Arg Leu Glu Lys Cys Ile  
225 230 235 240

Ser Leu Tyr Arg Glu Ile Tyr His Thr Ser Ile Met Phe His Lys Leu  
245 250 255

Phe Val Pro Leu Leu Phe Leu Ala Leu Ile Tyr Lys Val Leu Leu Ile  
260 265 270

Ala Leu Ile Gly Phe Asn Val Ala Val Glu Phe Tyr Leu Asn Ser Phe  
275 280 285

Ile Phe Trp Ile Leu Leu Gly Lys His Val Leu Asp Leu Phe Leu Val  
290 295 300

Thr Val Ser Val Glu Gly Ala Val Asn Gln Phe Leu Asn Ile Gly Met  
305 310 315 320

Gln Phe Gly Asn Val Gly Asp Leu Ser Lys Phe Gln Thr Thr Val Ser  
325 330 335

Gln Phe Ile Phe Ile Asp Phe Ile Pro Ile  
340 345

<210> 17  
<211> 736  
<212> PRT  
<213> Drosophila melanogaster

<400> 17

Met Val Ala Gln Lys Ser Arg Leu Leu Ala Arg Ala Phe Pro Tyr Leu  
1 5 10 15

Asp Ile Phe Ser Val Phe Ala Leu Thr Pro Pro Pro Gln Ser Phe Gly  
20 25 30

His Thr Pro His Arg Arg Leu Arg Trp Tyr Leu Met Thr Gly Tyr Val  
35 40 45

Phe Tyr Ala Thr Ala Ile Leu Ala Thr Val Phe Ile Val Ser Tyr Phe  
50 55 60

Asn Ile Ile Ala Ile Asp Glu Glu Val Leu Glu Tyr Asn Val Ser Asp  
65 70 75 80

Phe Thr Arg Val Met Gly Asn Ile Gln Lys Ser Leu Tyr Ser Ile Met  
85 90 95

Ala Ile Ala Asn His Leu Asn Met Leu Ile Asn Tyr Arg Arg Leu Gly  
100 105 110

Gly Ile Tyr Lys Asp Ile Ala Asp Leu Glu Met Asp Met Asp Glu Ala  
115 120 125

Ser Gln Cys Phe Gly Gly Gln Arg Gln Arg Phe Ser Phe Arg Phe Arg  
130 135 140

Met Ala Leu Cys Val Gly Val Trp Met Ile Leu Met Val Gly Ser Met  
145 150 155 160

Pro Arg Leu Thr Met Thr Ala Met Gly Pro Phe Val Ser Thr Leu Leu  
165 170 175

Lys Ile Leu Thr Glu Phe Val Met Ile Met Gln Gln Leu Lys Ser Leu  
180 185 190

Glu Tyr Cys Val Phe Val Leu Ile Ile Tyr Glu Leu Val Leu Arg Leu  
195 200 205

Arg Arg Thr Leu Ser Gln Leu Gln Glu Glu Phe Gln Asp Cys Glu Gln  
210 215 220

Gln Asp Met Leu Gln Ala Leu Cys Val Ala Leu Lys Arg Asn Gln Leu  
225 230 235 240

Leu Leu Gly Arg Ile Trp Arg Leu Glu Gly Asp Val Gly Ser Tyr Phe  
245 250 255

Thr Pro Thr Met Leu Leu Leu Phe Leu Tyr Asn Gly Leu Thr Ile Leu  
260 265 270

His Met Val Asn Trp Ala Tyr Ile Asn Lys Phe Leu Tyr Asp Ser Cys  
275 280 285

Cys Gln Tyr Gly Pro Glu Tyr Cys Leu Phe Val Leu Leu Val Tyr Glu  
290 295 300

Leu Ile Leu Arg Thr Arg His Val Leu Glu Gln Leu Lys Asp Asp Leu  
305 310 315 320

Glu Asp Phe Asp Cys Gly Ala Arg Ile Gln Glu Leu Cys Val Thr Leu  
325 330 335

Lys Gln Asn Gln Leu Leu Ile Gly Arg Ile Trp Arg Leu Val Asp Glu  
340 345 350

Ile Gly Ala Tyr Phe Arg Trp Ser Met Thr Leu Leu Phe Leu Tyr Asn  
355 360 365

Gly Leu Thr Ile Leu His Val Val Asn Trp Ala Ile Ile Arg Ser Ile  
370 375 380

Asp Pro Asn Asp Cys Cys Gln Leu Met Ser Phe His Phe Ser Leu Asn  
385 390 395 400

Met Glu Ala Asn Arg Ser Arg Leu Leu Ala Ala Ala Arg Pro Tyr Ile  
405 410 415

Gln Ile Tyr Ser Ile Phe Gly Leu Thr Pro Pro Ile Gln Phe Phe Thr  
420 425 430

Arg Thr Leu His Lys Arg Arg Gly Ile Val Ile Leu Gly Tyr Ala  
435 440 445

Cys Tyr Leu Ile Ser Ile Ser Leu Met Val Ile Tyr Glu Cys Tyr Ala  
450 455 460

Asn Ile Val Ala Leu Gln Lys Asp Ile His Lys Phe His Ala Glu Asp  
465 470 475 480

Ser Ser Lys Val Met Gly Asn Thr Gln Lys Val Leu Val Val Ala Met  
485 490 495

Phe Val Trp Asn Gln Leu Asn Ile Leu Leu Asn Phe Arg Arg Leu Ala  
500 505 510

Arg Ile Tyr Asp Asp Ile Ala Asp Leu Glu Ile Asp Leu Asn Asn Ala  
515 520 525

Ser Ser Gly Phe Val Gly Gln Arg His Trp Trp Arg Phe Arg Phe Arg  
530 535 540

Leu Ala Leu Ser Val Gly Leu Trp Ile Val Leu Leu Val Gly Leu Thr  
545 550 555 560

Pro Arg Phe Thr Leu Val Ala Leu Gly Pro Tyr Leu His Trp Thr Asn  
565 570 575

Lys Val Leu Thr Glu Ile Ile Leu Ile Met Leu Gln Leu Lys Cys Thr  
580 585 590

Glu Tyr Cys Val Phe Val Leu Leu Ile Tyr Glu Leu Ile Leu Arg Gly  
595 600 605



Arg His Ile Leu Gln Gln Ile Ser Val Glu Leu Glu Gly Asn Gln Ser  
610 615 620

Arg Asp Ser Val Gln Glu Leu Cys Val Ala Leu Lys Arg Asn Gln Leu  
625 630 635 640

Leu Ala Gly Arg Ile Trp Gly Leu Val Asn Glu Val Ser Leu Tyr Phe  
645 650 655

Thr Leu Ser Leu Thr Leu Leu Phe Leu Tyr Asn Glu Leu Thr Ile Leu  
660 665 670

Gln Ile Val Asn Trp Ala Leu Ile Lys Ser Val Asn Pro Asn Glu Cys  
675 680 685

Cys Gln Tyr Thr Glu Asp Tyr Leu Ile Leu Lys Met Gly Leu Arg Glu  
690 695 700

Tyr Ser Leu Gln Met Glu His Leu Lys Leu Ile Phe Thr Cys Gly Gly  
705 710 715 720

Leu Phe Asp Ile Asn Leu Lys Phe Phe Gly Gly Val Lys Leu Lys Leu  
725 730 735

<210> 18  
<211> 294  
<212> PRT  
<213> Drosophila melanogaster  
  
<400> 18

Met Glu Ala Lys Arg Ser Arg Leu Leu Thr Thr Ala Arg Pro Tyr Leu  
1 5 10 15

Gln Val Leu Ser Leu Phe Gly Leu Thr Pro Pro Ala Glu Phe Phe Thr  
20 25 30

Arg Thr Leu Arg Lys Arg Arg Arg Phe Cys Trp Met Ala Gly Tyr Ser  
35 40 45

Leu Tyr Leu Ile Ala Ile Leu Leu Met Val Phe Tyr Glu Phe His Ala  
50 55 60

Asn Ile Val Ser Leu His Leu Glu Ile Tyr Lys Phe His Val Glu Asp  
65 70 75 80

Phe Ser Lys Val Met Gly Arg Thr Gln Lys Phe Leu Ile Val Ala Ile  
85 90 95

Ala Thr Cys Asn Gln Leu Asn Ile Leu Leu Asn Tyr Gly Arg Leu Gly  
100 105 110

Leu Ile Tyr Asp Glu Ile Ala Asn Leu Asp Leu Gly Ile Asp Lys Ser  
115 120 125

Ser Lys Asn Phe Cys Gly Lys Ser His Trp Trp Ser Phe Arg Leu Arg  
130 135 140

Leu Thr Leu Ser Ile Gly Leu Trp Met Val Ile Ile Ile Gly Val Ile  
145 150 155 160

Pro Arg Leu Thr Leu Gly Arg Ala Gly Pro Phe Phe His Trp Val Asn  
165 170 175

Gln Val Leu Thr Gln Ile Ile Leu Ile Met Leu Gln Leu Lys Gly Pro  
180 185 190

Glu Tyr Cys Leu Phe Val Leu Leu Val Tyr Glu Leu Ile Leu Arg Thr  
195 200 205

Arg His Val Leu Glu Gln Leu Lys Asp Asp Leu Glu Asp Phe Asp Cys  
210 215 220

Gly Ala Arg Ile Gln Glu Leu Cys Val Thr Leu Lys Gln Asn Gln Leu  
225 230 235 240

Leu Ile Gly Arg Ile Trp Arg Leu Val Asp Glu Ile Gly Ala Tyr Phe  
245 250 255

Arg Trp Ser Met Thr Leu Leu Phe Leu Tyr Asn Gly Leu Thr Ile Leu  
260 265 270

His Val Val Asn Trp Ala Ile Ile Arg Ser Ile Asp Pro Asn Asp Cys  
275 280 285

Cys Gln Leu Ser Glu Glu  
290

<210> 19

<211> 398

<212> FRT

<213> Drosophila melanogaster

<400> 19

Met Phe Arg Pro Ser Gly Ser Gly Tyr Arg Gln Lys Trp Thr Gly Leu  
1 5 10 15

Thr Leu Lys Gly Ala Leu Tyr Gly Ser Trp Ile Leu Gly Val Phe Pro  
20 25 30

Phe Ala Tyr Asp Ser Trp Thr Arg Thr Leu Arg Arg Ser Lys Trp Leu  
35 40 45

Ile Ala Tyr Gly Phe Val Leu Asn Ala Ala Phe Ile Leu Leu Val Val  
50 55 60

Thr Asn Asp Thr Glu Ser Glu Thr Pro Leu Arg Met Glu Val Phe His  
65 70 75 80

Arg Asn Ala Leu Ala Glu Gln Ile Asn Gly Ile His Asp Ile Gln Ser  
85 90 95

Leu Ser Met Val Ser Ile Met Leu Leu Arg Ser Phe Trp Lys Ser Gly  
100 105 110

Asp Ile Glu Arg Thr Leu Asn Glu Leu Glu Asp Leu Gln His Arg Tyr  
115 120 125

Phe Arg Asn Tyr Ser Leu Glu Glu Cys Ile Ser Phe Asp Arg Phe Val  
130 135 140

Leu Tyr Lys Gly Phe Ser Val Val Leu Glu Leu Val Ser Met Leu Val  
145 150 155 160

Leu Glu Leu Gly Met Ser Pro Asn Tyr Ser Ala Gln Phe Phe Ile Gly  
165 170 175

Leu Gly Ser Leu Cys Leu Met Leu Leu Ala Val Leu Leu Gly Ala Ser  
180 185 190

His Phe His Leu Ala Val Val Phe Val Tyr Arg Tyr Val Trp Ile Val  
195 200 205

Asn Arg Glu Leu Leu Lys Leu Val Asn Lys Met Ala Ile Gly Glu Thr  
210 215 220

Val Glu Ser Glu Arg Met Asp Leu Leu Leu Tyr Leu Tyr His Arg Leu  
225 230 235 240

Leu Asp Leu Gly Gln Arg Leu Ala Ser Ile Tyr Asp Tyr Gln Met Val

245

250

255

Met Val Met Val Ser Phe Leu Ile Ala Asn Val Leu Gly Ile Tyr Phe  
260 265 270

Phe Ile Ile Tyr Ser Ile Ser Leu Asn Lys Ser Leu Asp Phe Lys Ile  
275 280 285

Leu Val Phe Val Gln Ala Leu Val Ile Asn Met Leu Asp Phe Trp Leu  
290 295 300

Asn Val Glu Ile Cys Glu Leu Ala Glu Arg Thr Gly Arg Gln Thr Ser  
305 310 315 320

Thr Ile Leu Lys Leu Phe Asn Asp Ile Glu Asn Ile Asp Glu Lys Leu  
325 330 335

Glu Arg Ser Val Ser Phe Thr Ser Gln His Tyr Cys Glu Thr Asp Phe  
340 345 350

Ala Leu Phe Cys Ser His Arg Arg Leu Arg Phe His His Cys Gly Leu  
355 360 365

Phe Tyr Val Asn Tyr Glu Met Gly Phe Arg Met Ala Ile Thr Ser Phe  
370 375 380

Leu Tyr Leu Leu Phe Leu Ile Gln Phe Asp Tyr Trp Asn Leu  
385 390 395

&lt;210&gt; 20

&lt;211&gt; 320

&lt;212&gt; PRT

&lt;213&gt; Drosophila melanogaster

&lt;400&gt; 20

Met Val Lys Gln Ala Glu Asp Arg Glu His Gly Ile Met Leu Asp Val  
1 5 10 15

Phe Gln Arg Asn Ala Leu Leu Tyr Gln Ile Ser Ser Leu Met Gly Val  
20 25 30

Val Gly Val Val Ser Ile Cys Thr Val His Leu Arg Thr Leu Trp Arg  
35 40 45

Ser Lys His Leu Glu Glu Ile Tyr Asn Gly Leu Met Leu Leu Glu Ala  
50 55 60

Lys Tyr Phe Cys Ser Asn Ala Val Glu Cys Pro Ala Phe Asp Gly Tyr  
65 70 75 80

Val Ile Gln Lys Gly Val Val Ile Val Val Gly Leu Leu Ala Pro Trp  
85 90 95

Met Val His Phe Gly Met Pro Asp Ser Lys Leu Pro Val Leu Asn Val  
100 105 110

Leu Val Val Ser Met Val Lys Leu Gly Thr Leu Leu Leu Ala Leu His  
115 120 125

Tyr His Leu Gly Val Val Ile Ile Tyr Arg Phe Val Trp Leu Ile Asn  
130 135 140

Arg Glu Leu Leu Ser Leu Val Cys Ser Leu Arg Gly Asn His Lys Gly  
145 150 155 160

Ser Ser Ser Arg Val Arg Phe Leu Leu Lys Leu Tyr Asn Lys Leu Val  
165 170 175

Asn Leu Tyr Ser Lys Leu Ala Asp Cys Tyr Asp Cys Gln Thr Val Leu  
180 185 190

Met Met Ala Ile Phe Leu Ala Ala Asn Ile Ile Val Cys Phe Tyr Met  
195 200 205

Ile Val Tyr Arg Ile Ser Leu Ser Lys Met Ser Phe Phe Val Met Leu  
210 215 220

Ile Met Phe Pro Leu Ala Ile Ala Asn Asn Phe Met Asp Phe Trp Leu  
225 230 235 240

Ser Met Lys Val Cys Asp Leu Leu Gln Lys Thr Gly Arg Gln Thr Ser  
245 250 255

Met Ile Leu Lys Leu Phe Asn Asp Ile Glu Asn Met Asp Lys Asp Leu  
260 265 270

Glu Ile Ser Ile Ser Asp Phe Ala Leu Tyr Cys Ser His Arg Arg Phe  
275 280 285

Lys Phe Leu His Cys Gly Leu Phe His Val Asn Arg Glu Met Gly Phe  
290 295 300

Lys Met Phe Val Ala Ser Val Leu Tyr Leu Leu Tyr Leu Val Gln Phe  
305 310 315 320

<210> 21  
<211> 389  
<212> PRT  
<213> Drosophila melanogaster

<400> 21

Met Phe Ala Ser Arg Ser Asp Leu Gln Ser Arg Leu Cys Trp Ile Ile  
1 5 10 15

Leu Lys Ala Thr Leu Tyr Ser Ser Trp Phe Leu Gly Val Phe Pro Tyr  
20 25 30

Arg Phe Asp Ser Arg Asn Gly Gln Leu Lys Arg Ser Arg Phe Leu Leu  
35 40 45

Phe Tyr Gly Leu Ile Leu Asn Phe Phe Leu Leu Leu Lys Met Val Cys  
50 55 60

Ser Gly Gly Gln Lys Leu Gly Ile Pro Glu Ala Phe Ala Arg Asn Ser  
65 70 75 80

Val Leu Glu Asn Thr His Tyr Thr Thr Gly Met Leu Ala Val Phe Ser  
85 90 95

Cys Val Val Ile His Phe Leu Asn Phe Trp Gly Ser Thr Arg Val Gln  
100 105 110

Asp Leu Ala Asn Glu Leu Leu Val Leu Glu Tyr Gln Gln Phe Ala Ser  
115 120 125

Leu Asn Glu Thr Lys Cys Pro Lys Phe Asn Ser Phe Val Ile Gln Lys  
130 135 140

Trp Leu Ser Val Ile Gly Leu Leu Leu Ser Tyr Leu Ser Ile Ala Tyr  
145 150 155 160

Gly Leu Pro Gly Asn Asn Phe Ser Val Glu Met Val Leu Ile Asn Ser  
165 170 175

Leu Val Gln Phe Ser Phe Asn Cys Asn Ile Met His Tyr Tyr Ile Gly  
180 185 190

Val Leu Leu Ile Tyr Arg Tyr Leu Trp Leu Ile Asn Gly Gln Leu Leu  
195 200 205

Glu Met Val Thr Asn Leu Lys Leu Asp Cys Ser Val Asp Ser Ser Arg  
210 215 220

Ile Arg Lys Tyr Leu Ser Leu Tyr Arg Arg Leu Leu Glu Leu Lys Gly  
225 230 235 240

Tyr Met Val Ala Thr Tyr Glu Tyr His Met Thr Leu Val Leu Thr Thr  
245 250 255

Gly Leu Ala Ser Asn Phe Leu Ala Ile Tyr Ser Trp Ile Val Leu Asp  
260 265 270

Ile Ser Met Asn Ile Asn Phe Ile Tyr Leu Leu Ile Phe Pro Leu Phe  
275 280 285

Leu Leu Val Asn Val Trp Asn Leu Trp Leu Ser Ile Ala Ala Ser Asp  
290 295 300

Leu Ala Glu Asn Ala Gly Lys Ser Thr Gln Thr Val Leu Lys Leu Phe  
305 310 315 320

Ala Asp Leu Glu Val Lys Asp Ile Glu Leu Glu Arg Ser Val Ser Val  
325 330 335

Asn Ser Asn Arg Tyr Lys Gln Val Asn Glu Phe Ala Leu Leu Cys Gly  
340 345 350

His Cys Gln Phe Asn Phe His Val Cys Gly Leu Phe Thr Ile Asn Tyr  
355 360 365

Lys Met Gly Phe Gln Met Ile Ile Thr Ser Phe Leu Tyr Leu Ile Tyr  
370 375 380

Met Ile Gln Phe Asp  
385

<210> 22

<211> 287

<212> PRT

<213> Drosophila melanogaster

<400> 22

Met Ile Asn Val Val Ile Gly Ile Ile Asn Val Leu Ser Ala Leu Ile  
1 5 10 15

Val His Phe Met Asn Phe Trp Gly Ser Arg Lys Val Gly Glu Ile Cys  
20 25 30

Asn Glu Leu Leu Ile Leu Glu Tyr Gln Asp Phe Glu Gly Leu Asn Gly  
35 40 45

Arg Asn Cys Pro Asn Phe Asn Cys Phe Val Ile Gln Lys Cys Leu Thr  
50 55 60

Ile Leu Gly Gln Leu Leu Ser Phe Phe Thr Leu Asn Phe Ala Leu Pro  
65 70 75 80

Gly Leu Glu Phe His Ile Cys Leu Val Leu Ser Cys Leu Met Glu  
85 90 95

Phe Ser Leu Asn Leu Asn Ile Met His Tyr His Val Gly Val Leu Leu  
100 105 110

Ile Tyr Arg Tyr Val Trp Leu Ile Asn Glu Gln Leu Lys Asp Leu Val  
115 120 125

Ser Gln Leu Lys Leu Asn Pro Glu Thr Asp Phe Ser Arg Ile His Gln  
130 135 140

Phe Leu Ser Leu Tyr Lys Arg Leu Leu Glu Leu Asn Arg Lys Leu Val  
145 150 155 160

Ile Ala Tyr Glu Tyr Gln Met Thr Leu Phe Ile Ile Ala Gln Leu Ser  
165 170 175

Gly Asn Ile Val Val Ile Tyr Phe Leu Ile Val Tyr Gly Leu Ser Met  
180 185 190

Arg Thr Tyr Ser Ile Phe Leu Val Ala Phe Pro Asn Ser Leu Leu Ile  
195 200 205

Asn Ile Trp Asp Phe Trp Leu Cys Ile Ala Ala Cys Asp Leu Thr Glu  
210 215 220

Lys Ala Gly Asp Glu Thr Ala Ile Ile Leu Lys Ile Phe Ser Asp Leu  
225 230 235 240

Glu His Arg Asp Asp Lys Leu Glu Lys Phe Arg Phe Gln Leu Cys Gly  
245 250 255

Leu Phe Ser Met Asn Cys Arg Met Gly Phe Lys Met Ile Ile Thr Thr



260

265

270

Phe Leu Tyr Leu Val Tyr Leu Val Gln Phe Asp Tyr Met Asn Leu  
275 280 285

&lt;210&gt; 23

&lt;211&gt; 410

&lt;212&gt; PRT

&lt;213&gt; Drosophila melanogaster

&lt;400&gt; 23

Met Ser Gln Pro Lys Arg Ile His Arg Ile Cys Lys Gly Leu Ala Arg  
1 5 10 15

Phe Thr Ile Arg Ala Thr Leu Tyr Gly Ser Trp Val Leu Gly Leu Phe  
20 25 30

Pro Phe Thr Phe Asp Ser Arg Lys Arg Arg Leu Asn Arg Ser Lys Trp  
35 40 45

Leu Leu Ala Tyr Gly Leu Val Leu Asn Leu Thr Leu Leu Val Leu Ser  
50 55 60

Met Leu Pro Ser Thr Asp Asp His Asn Ser Val Lys Val Glu Val Phe  
65 70 75 80

Gln Arg Asn Pro Leu Val Lys Gln Val Glu Leu Val Glu Val Ile  
85 90 95

Ser Leu Ile Thr Thr Leu Val Thr His Leu Arg Thr Phe Ser Arg Ser  
100 105 110

Ser Glu Leu Val Glu Ile Leu Asn Glu Leu Leu Val Leu Asp Lys Asn  
115 120 125

His Phe Ser Lys Leu Met Leu Ser Glu Cys His Thr Phe Asn Arg Tyr  
130 135 140

Val Ile Glu Lys Gly Leu Val Ile Ile Leu Glu Ile Gly Ser Ser Leu  
145 150 155 160

Val Leu Tyr Phe Gly Ile Pro Asn Ser Lys Ile Val Val Tyr Glu Ala  
165 170 175

Val Cys Ile Tyr Ile Val Gln Leu Glu Val Leu Met Val Val Met His  
180 185 190

Phe His Leu Ala Val Ile Tyr Ile Tyr Arg Tyr Leu Trp Ile Ile Asn  
195 200 205

Gly Gln Leu Leu Asp Met Ala Ser Arg Leu Arg Gly Asp Ser Val  
210 215 220

Asp Pro Asp Arg Ile Gln Leu Leu Leu Trp Leu Tyr Ser Arg Leu Leu  
225 230 235 240

Asp Leu Asn His Arg Leu Thr Ala Ile Tyr Asp Ile Gln Val Thr Leu  
245 250 255

Phe Met Ala Thr Leu Phe Ser Val Asn Ile Ile Val Gly His Val Leu  
260 265 270

Val Ile Cys Trp Ile Asn Ile Thr Arg Phe Ser Leu Leu Val Ile Phe  
275 280 285

Leu Leu Phe Pro Gln Ala Leu Ile Ile Asn Phe Trp Asp Leu Trp Gln  
290 295 300

Gly Ile Ala Phe Cys Asp Leu Ala Glu Ser Thr Gly Lys Lys Thr Ser  
305 310 315 320

Met Ile Leu Lys Leu Phe Asn Asp Met Glu Asn Met Asp Gln Glu Thr  
325 330 335

Glu Arg Arg Val Ser Glu Tyr Met Phe Gln Asn Leu Met Tyr Phe Lys  
340 345 350

Tyr Phe Lys His Pro Leu Ile Phe Val Ala Glu Phe Thr Leu Phe Cys  
355 360 365

Ser His Arg Arg Leu Lys Val Cys His Leu Gly Leu Leu Asp Ile Asn  
370 375 380

Tyr Glu Met Gly Phe Arg Met Ile Ile Thr Asn Ile Leu Tyr Val Val  
385 390 395 400

Phe Leu Val Gln Phe Asp Tyr Met Asn Leu  
405 410

<210> 24

<211> 364

<212> PRT

<213> Drosophila melanogaster

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Arg Thr Gly Tyr Ser Trp Gly Ser Lys Gln Val Met Trp Ala Ile Phe  
20 25 30

Ile Tyr Ser Cys Gln Thr Thr Ile Val Val Leu Val Leu Arg Glu Arg  
35 40 45

Val Lys Lys Phe Val Thr Ser Pro Asp Lys Arg Phe Asp Glu Ala Ile  
50 55 60

Tyr Asn Val Ile Phe Ile Ser Leu Leu Phe Thr Asn Phe Leu Leu Pro  
65                      70                      75                      80

Val Ala Ser Trp Arg His Gly Pro Gln Val Ala Ile Phe Lys Asn Met  
85 90 95

Trp Thr Asn Tyr Gln Tyr Lys Phe Phe Lys Thr Thr Gly Ser Pro Ile  
100 105 110

Val Phe Pro Asn Leu Tyr Pro Leu Thr Trp Ser Leu Cys Val Phe Ser  
115 120 125

Trp Leu Leu Ser Ile Ala Ile Asn Leu Ser Gln Tyr Phe Leu Gln Pro  
130 135 140

Asp Phe Arg Leu Trp Tyr Thr Phe Ala Tyr Tyr Pro Ile Ile Ala Met  
145 150 155 160

Leu Asn Cys Phe Cys Ser Leu Trp Tyr Ile Asn Cys Asn Ala Phe Gly  
165 170 175

Thr Ala Ser Arg Ala Leu Ser Asp Ala Leu Gln Thr Thr Ile Arg Gly  
180 185 190

Glu Lys Pro Ala Gln Lys Leu Thr Glu Tyr Arg His Leu Trp Val Asp  
195 200 205

Leu Ser His Met Met Gln Gln Leu Gly Arg Ala Tyr Ser Asn Met Tyr  
210 215 220

Gly Met Tyr Cys Leu Val Ile Phe Phe Thr Thr Ile Ile Ala Thr Tyr  
225 230 235 240

Gly Ser Ile Ser Glu Ile Ile Asp His Gly Ala Thr Tyr Lys Glu Val  
245 250 255

Gly Leu Phe Val Ile Val Phe Tyr Cys Met Gly Leu Leu Tyr Ile Ile  
260 265 270

Cys Asn Glu Ala His Tyr Ala Ser Arg Lys Val Gly Leu Asp Phe Gln  
275 280 285

Thr Lys Leu Leu Asn Ile Asn Leu Thr Ala Val Asp Ala Ala Thr Gln  
290 295 300

Lys Glu Val Glu Met Leu Leu Val Ala Ile Asn Lys Asn Pro Pro Ile  
305 310 315 320

Met Asn Leu Asp Gly Tyr Ala Asn Ile Asn Arg Glu Leu Ile Thr Thr  
325 330 335

Asn Ile Ser Phe Met Ala Thr Tyr Leu Val Val Leu Leu Gln Phe Lys  
340 345 350

Ile Thr Glu Gln Arg Arg Ile Gly Gln Gln Gln Ala  
355 360

<210> 25

<211> 377

<212> PRT

<213> Drosophila melanogaster

<400> 25

Met Phe Gln Pro Arg Arg Gly Phe Ser Cys His Leu Ala Trp Phe Met  
1 5 10 15

Leu Gln Thr Thr Leu Tyr Ala Ser Trp Leu Leu Gly Leu Phe Pro Phe  
20 25 30

Thr Phe Asp Ser Arg Arg Lys Gln Leu Lys Arg Ser Arg Trp Leu Leu  
35 40 45

Leu Tyr Gly Phe Val Leu His Ser Leu Ala Met Cys Leu Ala Met Ser  
50 55 60

Ser His Leu Ala Ser Lys Gln Arg Arg Lys Tyr Asn Ala Phe Glu Arg  
65 70 75 80



Arg Lys Phe Arg Phe Gln Leu Cys Gly Leu Phe Ser Ile Asn His Asn  
340 345 350

Met Gly Phe Gln Met Ile Ile Thr Ser Phe Leu Tyr Leu Val Tyr Leu  
355 360 365

Leu Gln Phe Asp Phe Met Asn Leu Cys  
370 375

<210> 26

<211> 370

<212> PRT

<213> Drosophila melanogaster

<400> 26

Met Lys Thr Leu Glu Cys Leu Thr Arg Arg Phe Leu Glu Val Ile Phe  
1 5 10 15

Ser Val Leu Ala Leu Val Pro Leu Pro Pro Ile Ser Gln Leu Gly Trp  
20 25 30

Leu Phe Leu Ser Leu Ala Ile Arg Cys Cys Trp Ile Val Tyr Phe Ile  
35 40 45

Tyr Leu Leu Asp Val Ala Ile Ser Phe Ser Trp Val Ala Ile Glu Asn  
50 55 60

Val Gly Asn Ala Val Gly Thr Met Leu Phe Val Gly Asn Ser Val Leu  
65 70 75 80

Gly Phe Ala Leu Leu Glu Ser Val Leu Lys Gln Lys Thr His Ser  
85 90 95

Gln Leu Glu Asp Leu Arg Val Gln Thr Glu Leu Gln Leu Gln Arg Leu  
100 105 110

Gly Met Phe Gly Arg Ser Arg His Ala Ala Tyr Leu Leu Pro Leu Ile  
115 120 125

Gly Val Gln Phe Thr Cys Asp Leu Val Arg Leu Ala Thr Asn Phe Gly  
130 135 140

Glu Thr Val Ser Pro Val Phe Cys Ile Ser Leu Pro Leu Met Trp Leu  
145 150 155 160

Leu Arg Tyr Arg Tyr Val Gln Leu Val Gln His Val Met Asp Leu Asn  
165 170 175

Gln Arg Ser Ile His Leu Arg Arg Ser Leu Leu Ser Met Ala Ser Gly  
180 185 190

Asn Asp Leu Trp Gln Pro Tyr Gly Val Gln Glu Cys Leu Gln Leu Gln  
195 200 205

Thr Leu Arg Thr Thr Tyr Glu Arg Ile Phe Glu Cys Tyr Glu Thr Phe  
210 215 220

Ser Asp Cys Tyr Gly Trp Gly Met Leu Gly Leu His Leu Leu Thr Ser  
225 230 235 240

Phe Gln Phe Val Thr Asn Ala Tyr Trp Met Ile Met Gly Ile Tyr Asp  
245 250 255

Gly Gly Asn Val Arg Ser Leu Ile Phe Asn Gly Ala Thr Gly Ile Asp  
260 265 270

Phe Gly Thr Pro Ile Ala Thr Leu Phe Trp His Gly Asp Ser Gly Ala  
275 280 285

Glu Asn Gly Arg Gln Ile Gly Cys Leu Ile Ser Lys Leu Val Lys Pro  
290 295 300

Gln Gly Ser Lys Leu Tyr Asn Asp Leu Val Ser Glu Phe Ser Leu Gln  
305 310 315 320

Thr Leu His Gln Arg Phe Val Val Thr Ala Lys Asp Phe Phe Ser Leu  
325 330 335

Asn Leu His Leu Leu Ser Ser Met Phe Ala Ala Val Val Thr Tyr Leu  
340 345 350

Val Ile Leu Ile Gln Phe Met Phe Ala Glu Arg Ser Ser Thr Arg Gly  
355 360 365

Ser Gly  
370

<210> 27  
<211> 374  
<212> PRT  
<213> Drosophila melanogaster

<400> 27

Met Phe Pro Pro Thr Arg Val Gln Ala Ser Ser Arg Val Val Leu Lys  
1 5 10 15

Ile Phe His Phe Ile Leu Val Ala Phe Ser Leu Arg Ser Arg Arg Leu  
20 25 30

Ser Arg Leu Val Leu Trp Leu Gln Phe Leu Gly Trp Leu Thr Trp Phe  
35 40 45

Ile Ser Met Trp Thr Gln Ser Val Ile Tyr Ala Gln Thr Ile Asp Cys  
50 55 60

Thr Leu Asp Cys Ser Leu Arg His Ile Leu Thr Phe Phe Gln Thr Val  
65 70 75 80

Ser His Ala Phe Ile Val Val Thr Ser Phe Leu Asp Gly Phe Arg Ile  
85 90 95

Lys Gln Asp Gln Leu Asp Glu Pro Ile Ala Phe Glu Asp Ser Asp Pro  
100 105 110

Trp Leu Ala Phe Thr Val Leu Ala Met Leu Val Pro Thr Leu Gly Val  
115 120 125

Glu Tyr Leu Val Cys Ser Asn Ala Pro Glu Tyr Ala Phe Arg Ile Arg  
130 135 140

Ile Tyr His Leu Lys Thr Leu Pro Ser Phe Leu Ala Leu Gln Val Gln  
145 150 155 160

Ile Ile Ser Phe Ile Leu Glu Val Met Lys Val Asn Ile Arg Val Arg  
165 170 175

Gln Thr Lys Leu Gln Leu Leu Ile Leu Ala Arg Glu Leu Ser Cys Arg  
180 185 190

Trp Pro Gln Arg Lys Gln Lys Pro Gln Phe Ser Asp Gln Gln Ala His  
195 200 205

Arg Val Lys Asp Leu Lys Arg Arg Tyr Asn Asp Leu His Tyr Leu Phe  
210 215 220

Val Arg Ile Asn Gly Tyr Phe Gly Gly Ser Leu Leu Thr Ile Ile Ile  
225 230 235 240



Val His Phe Ala Ile Phe Val Ser Asn Ser Tyr Trp Leu Phe Val Asp  
245 250 255

Ile Arg Thr Arg Pro Trp Arg Ile Tyr Ala Ile Leu Leu Asn Leu Gly  
260 265 270

Phe Ile Phe Asn Val Ala Leu Gln Met Ala Ala Ala Cys Trp His Cys  
275 280 285

Gln Gln Ser Tyr Asn Leu Gly Arg Gln Ile Gly Cys Leu Ile Ser Lys  
290 295 300

Leu Val Lys Pro Gln Gly Ser Lys Leu Tyr Asn Asp Leu Val Ser Glu  
305 310 315 320

Phe Ser Leu Gln Thr Leu His Gln Arg Phe Val Val Thr Ala Lys Asp  
325 330 335

Phe Phe Ser Leu Asn Leu His Leu Leu Ser Ser Met Phe Ala Ala Val  
340 345 350

Val Thr Tyr Leu Val Ile Leu Ile Gln Phe Met Phe Ala Glu Arg Ser  
355 360 365

Ser Thr Arg Gly Ser Gly  
370

<210> 28

<211> 416

<212> PRT

<213> Drosophila melanogaster

<400> 28

Met Pro Ile Tyr Glu Gln Val Ser Asp Tyr Glu Val Gly Pro Pro Thr  
1 5 10 15

Lys Thr Asn Glu Phe Tyr Ser Phe Phe Val Arg Gly Val Val His Ala  
20 25 30

Leu Thr Ile Phe Asn Val Tyr Ser Leu Phe Thr Pro Ile Ser Ala Gln  
35 40 45

Leu Phe Phe Ser Tyr Arg Glu Thr Asp Asn Val Asn Gln Trp Ile Glu  
50 55 60

Leu Leu Leu Cys Ile Leu Thr Tyr Thr Leu Thr Val Phe Val Cys Ala  
65 70 75 80

His Asn Thr Thr Ser Met Leu Arg Ile Met Asn Glu Ile Leu Gln Leu  
85 90 95

Asp Glu Glu Val Arg Arg Gln Phe Gly Ala Asn Leu Ser Gln Asn Phe  
100 105 110

Gly Phe Leu Val Lys Phe Leu Val Gly Ile Thr Ala Cys Gln Ala Tyr  
115 120 125

Ile Ile Val Leu Lys Ile Tyr Ala Val Gln Gly Glu Ile Thr Pro Thr  
130 135 140

Ser Tyr Ile Leu Leu Ala Phe Tyr Gly Ile Gln Asn Gly Leu Thr Ala  
145 150 155 160

Thr Tyr Ile Val Phe Ala Ser Ala Leu Leu Arg Ile Val Tyr Ile Arg  
165 170 175

Phe His Phe Ile Asn Gln Leu Leu Asn Gly Tyr Thr Tyr Gly Gln Gln  
180 185 190

His Arg Arg Lys Glu Gly Gly Ala Arg Ala Arg Arg Gln Arg Gly Asp  
195 200 205

Val Asn Pro Asn Val Asn Pro Ala Leu Met Glu His Phe Pro Glu Asp  
210 215 220

Ser Leu Phe Ile Tyr Arg Met His Asn Lys Leu Arg Ile Tyr Lys  
225 230 235 240

Gly Ile Asn Asp Cys Cys Asn Leu Ile Leu Val Ser Phe Leu Gly Tyr  
245 250 255

Ser Phe Tyr Thr Val Thr Thr Asn Cys Tyr Asn Leu Phe Val Gln Ile  
260 265 270

Thr Gly Lys Gly Met Val Ser Pro Asn Ile Leu Gln Trp Cys Phe Ala  
275 280 285

Trp Leu Cys Leu His Val Ser Leu Leu Ala Leu Leu Ser Arg Ser Cys  
290 295 300

Gly Leu Thr Thr Thr Glu Val Ser Asn Tyr Ile Gly Asp Lys Ile Ser



Gly Arg Leu Lys Trp Gln Ser Tyr Ala Lys Ile Leu Ala Leu Gly Ile  
115 120 125

Gly Phe Leu Val Thr Val Leu Pro Ser Ile Tyr Val Ala Leu Ser Gly  
130 135 140

Ser Leu Leu Tyr Phe Trp Ser Ser Leu Leu Ser Ile Leu Ile Ile Arg  
145 150 155 160

Met Gln Phe Val Leu Val Leu Leu Asn Val Glu Leu Leu Gly His His  
165 170 175

Val Ser Leu Leu Gly Ile Arg Leu Gln Asn Val Leu Glu Cys His Leu  
180 185 190

Met Gly Ala Asn Cys Thr Leu Asp Gly Asn Ala Asn Arg Leu Cys Ser  
195 200 205

Leu Glu Phe Leu Leu Ala Leu Lys Gln Ser His Met Gln Leu His Tyr  
210 215 220

Leu Phe Thr His Phe Asn Asp Leu Phe Gly Trp Ser Ile Leu Gly Thr  
225 230 235 240

Tyr Val Val Leu Phe Ser Asp Ser Thr Val Asn Ile Tyr Trp Thr Gln  
245 250 255

Gln Val Leu Val Glu Val Tyr Glu Tyr Lys Tyr Leu Tyr Ala Thr Phe  
260 265 270

Ser Val Phe Val Pro Ser Phe Phe Asn Ile Leu Val Phe Cys Arg Cys  
275 280 285

Gly Glu Phe Cys Gln Arg Gln Ser Val Leu Ile Gly Ser Tyr Leu Arg  
290 295 300

Asn Leu Ser Cys His Pro Ser Ile Gly Arg Glu Thr Ser Tyr Lys Asp  
305 310 315 320

Leu Leu Met Glu Phe Ile Leu Gln Val Glu Gln Asn Val Leu Ala Ile  
325 330 335

Asn Ala Glu Gly Phe Met Ser Thr Asp Asn Ser Leu Leu Met Ser Ile  
340 345 350

Leu Ala Ala Lys Val Thr Tyr Leu Ile Val Leu Met Gln Phe Ser Ser  
 355 360 365

Val

<210> 30  
 <211> 372  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 30

Met Gly Thr Arg Asn Arg Lys Leu Leu Phe Phe Leu His Tyr Gln Arg  
 1 5 10 15

Tyr Leu Gly Leu Thr Asn Leu Asp Phe Ser Lys Ser Leu His Ile Tyr  
 20 25 30

Trp Leu His Gly Thr Trp Ser Ser Thr Ala Ile Gln Ile Val Val Val  
 35 40 45

Gly Val Phe Met Ala Ala Leu Leu Gly Ala Leu Ala Glu Ser Leu Tyr  
 50 55 60

Tyr Met Glu Thr Lys Ser Gln Thr Gly Asn Thr Phe Asp Asn Ala Val  
 65 70 75 80

Ile Leu Thr Thr Ser Val Thr Gln Leu Leu Ala Asn Leu Trp Leu Arg  
 85 90 95

Ser Gln Gln Lys Ser Gln Val Asn Leu Leu Gln Arg Leu Ser Gln Val  
 100 105 110

Val Glu Leu Leu Gln Phe Glu Pro Tyr Ala Val Pro Gln Phe Arg Trp  
 115 120 125

Leu Tyr Arg Ile Trp Leu Leu Val Cys Leu Ile Tyr Gly Ala Met Val  
 130 135 140

Thr His Phe Gly Ile Asn Trp Leu Thr Thr Met Gln Ile Ser Arg Val  
 145 150 155 160

Leu Thr Leu Ile Gly Phe Val Tyr Arg Cys Val Leu Ala Asn Phe Gln  
 165 170 175

Phe Thr Cys Tyr Thr Gly Met Val Val Ile Leu Lys Lys Leu Leu Gln  
 180 185 190

Val Gln Val Lys Gln Leu Glu His Leu Val Ser Thr Thr Thr Ile Ser  
195 200 205

Met Ala Gly Val Ala Gly Cys Leu Arg Thr His Asp Glu Ile Leu Leu  
210 215 220

Leu Gly Gln Arg Glu Leu Ile Ala Val Tyr Gly Gly Val Ile Leu Phe  
225 230 235 240

Leu Phe Ile Tyr Gln Val Met Gln Cys Ile Leu Ile Phe Tyr Ile Ser  
245 250 255

Asn Leu Glu Gly Phe His Ser Ser Asn Asp Leu Val Leu Ile Phe Cys  
260 265 270

Trp Leu Ala Pro Met Leu Phe Tyr Leu Ile Leu Pro Leu Val Val Asn  
275 280 285

Asp Ile His Asn Gln Ala Asn Lys Thr Ala Lys Met Leu Thr Lys Val  
290 295 300

Pro Arg Thr Gly Thr Gly Leu Asp Arg Met Ile Glu Lys Phe Leu Leu  
305 310 315 320

Lys Asn Leu Arg Gln Lys Pro Ile Leu Thr Ala Tyr Gly Phe Phe Ala  
325 330 335

Leu Asp Lys Ser Thr Leu Phe Lys Leu Phe Thr Ala Ile Phe Thr Tyr  
340 345 350

Met Val Ile Leu Val Gln Phe Lys Glu Met Glu Asn Ser Thr Lys Ser  
355 360 365

Ile Asn Lys Phe  
370

<210> 31  
<211> 381  
<212> PRT  
<213> Drosophila melanogaster

<400> 31

Met Asp Phe Gln Pro Gly Glu Leu Cys Ala Tyr Tyr Arg Leu Cys Arg  
1 5 10 15

Tyr Leu Gly Ile Phe Cys Ile Asp Tyr Asn Pro Thr Lys Lys Lys Phe  
 20 25 30  
 Arg Leu Arg Arg Ser Val Leu Cys Tyr Ile Val His Phe Ala Leu Gln  
 35 40 45  
 Ala Tyr Leu Val Gly Cys Ile Ser Val Met Val Thr Tyr Trp Arg Arg  
 50 55 60  
 Cys Phe Lys Ser Glu Leu Thr Thr Thr Gly Asn His Phe Asp Arg Leu  
 65 70 75 80  
 Val Met Val Ile Ala Leu Gly Ile Leu Val Val Gln Asn Ala Trp Leu  
 85 90 95  
 Ile Trp Leu Gln Ala Pro His Leu Arg Ile Val Arg Gln Ile Glu Phe  
 100 105 110  
 Tyr Arg Arg Asn His Leu Ala Asn Val Arg Leu Leu Leu Pro Lys Arg  
 115 120 125  
 Leu Leu Trp Leu Ile Ile Ala Thr Asn Val Val Tyr Met Ala Asn Phe  
 130 135 140  
 Ile Lys Thr Cys Ile Phe Glu Trp Leu Thr Asp Ala Ser Arg Leu Phe  
 145 150 155 160  
 Val Ile Thr Ser Leu Gly Phe Pro Leu Arg Tyr Leu Val Thr Ser Phe  
 165 170 175  
 Thr Met Gly Thr Tyr Phe Cys Met Val His Ile Val Arg Leu Val Leu  
 180 185 190  
 Asp Trp Asn Gln Ser Gln Ile Asn Ala Ile Ile Asp Glu Ser Ala Asp  
 195 200 205  
 Leu Lys Met Thr Ser Pro Asn Arg Leu Arg Leu Arg Val Cys Leu Glu  
 210 215 220  
 Met His Asp Arg Leu Met Leu Leu Cys Asn Asp Glu Ile Ser Leu Val  
 225 230 235 240  
 Tyr Gly Phe Ile Ala Trp Leu Ser Trp Met Phe Ala Ser Leu Asp Val  
 245 250 255  
 Thr Gly Val Ile Tyr Leu Thr Met Val Ile Gln Thr Lys Lys Ser Ile

260

265

270

Val Leu Lys Leu Ile Thr Asn Val Val Trp Leu Ser Pro Thr Phe Met  
275 280 285

Thr Cys Ala Ala Ser Phe Met Ser Asn Arg Val Thr Ile Gln Ala Asn  
290 295 300

Lys Thr Ala Lys Met Leu Thr Lys Val Pro Arg Thr Gly Thr Gly Leu  
305 310 315 320

Asp Arg Met Ile Glu Lys Phe Leu Leu Lys Asn Leu Arg Gln Lys Pro  
325 330 335

Ile Leu Thr Ala Tyr Gly Phe Phe Ala Leu Asp Lys Ser Thr Leu Phe  
340 345 350

Lys Leu Phe Thr Ala Ile Phe Thr Tyr Met Val Ile Leu Val Gln Phe  
355 360 365

Lys Glu Met Glu Asn Ser Thr Lys Ser Ile Asn Lys Phe  
370 375 380

<210> 32

<211> 381

<212> PRT

<213> Drosophila melanogaster

<400> 32

Met Lys Arg Asn Ala Phe Glu Glu Leu Arg Val Gln Leu Arg Thr Leu  
1 5 10 15

Lys Trp Leu Gly Val Leu Arg Phe Thr Ile Asp Phe Asn Lys Cys Leu  
20 25 30

Val Arg Glu Asn Ala Ser Glu Glu Arg Ser Ala Trp Leu Tyr Leu Ile  
35 40 45

Gly Val Val Gly Ile Thr Cys Ser Leu Ile Val Tyr Ser Thr Tyr Phe  
50 55 60

Pro Ser His Phe Ile Met Gly Lys His Asn Thr Thr Gly Asn Cys Tyr  
65 70 75 80

Ala Leu Ile Asn Ile Arg Ser Cys Ser Ile Val Thr Met Leu Ile Tyr  
85 90 95



Thr Gln Leu Tyr Ile Gln Arg Phe Arg Phe Val Ala Leu Leu Gln Ser  
100 105 110

Ile Leu Arg Phe Asn Gln Ile Ser Gly Ser His Arg Glu Glu Gly Arg  
115 120 125

Phe Ala Phe Tyr Tyr Tyr Thr His Leu Ser Leu Leu Ile Ile Cys Met  
130 135 140

Leu Asn Tyr Ala Tyr Gly Tyr Trp Thr Ala Gly Val Arg Leu Thr Thr  
145 150 155 160

Ile Pro Ile Tyr Leu Leu Gln Tyr Gly Phe Ser Tyr Leu Phe Leu Gly  
165 170 175

Gln Val Val Val Leu Phe Ala Cys Ile Gln Gln Ile Leu Leu Ser Ile  
180 185 190

Leu Lys Tyr Tyr Asn Gln Val Val Leu Lys Asn Ile Lys Ser Ser Lys  
195 200 205

Glu Ser Arg Glu Phe Tyr Tyr Asn Phe Cys Lys Tyr Asn Gln Val Ile  
210 215 220

Trp Leu Ser Tyr Thr Glu Ile Asn His Cys Phe Gly Leu Leu Leu Leu  
225 230 235 240

Leu Val Thr Gly Leu Ile Leu Leu Ile Thr Pro Ser Gly Pro Phe Tyr  
245 250 255

Leu Val Ser Thr Ile Phe Glu Gly Arg Phe Arg Gln Asn Trp Gln Phe  
260 265 270

Ser Leu Met Ser Phe Thr Ala Ile Leu Trp Ser Leu Pro Trp Ile Val  
275 280 285

Leu Leu Val Leu Ala Met Gly Arg Asn Asp Val Gln Lys Glu Ala Asn  
290 295 300

Lys Thr Ala Lys Met Leu Thr Lys Val Pro Arg Thr Gly Thr Gly Leu  
305 310 315 320

Asp Arg Met Ile Glu Lys Phe Leu Leu Lys Asn Leu Arg Gln Lys Pro  
325 330 335

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Ile Leu Thr Ala Tyr Gly Phe Phe Ala Leu Asp Lys Ser Thr Leu Phe  
340 345 350

Lys Leu Phe Thr Ala Ile Phe Thr Tyr Met Val Ile Leu Val Gln Phe  
355 360 365

Lys Glu Met Glu Asn Ser Thr Lys Ser Ile Asn Lys Phe  
370 375 380

<210> 33

<211> 371

<212> PRT

<213> Drosophila melanogaster

<400> 33

Met Ser Lys Val Cys Arg Asp Leu Arg Ile Tyr Leu Arg Leu Leu His  
1 5 10 15

Ile Met Gly Met Met Cys Trp His Phe Asp Ser Asp His Cys Gln Leu  
20 25 30

Val Ala Thr Ser Gly Ser Glu Arg Tyr Ala Val Val Tyr Ala Gly Cys  
35 40 45

Ile Leu Val Ser Thr Thr Ala Gly Phe Ile Phe Ala Leu Leu His Pro  
50 55 60

Ser Arg Phe His Ile Ala Ile Tyr Asn Gln Thr Gly Asn Phe Tyr Glu  
65 70 75 80

Ala Val Ile Phe Arg Ser Thr Cys Val Val Leu Phe Leu Val Tyr Val  
85 90 95

Ile Leu Tyr Ala Trp Arg His Arg Tyr Arg Asp Leu Val Gln His Ile  
100 105 110

Leu Arg Leu Asn Arg Arg Cys Ala Ser Ser Cys Thr Asn Gln Gln Phe  
115 120 125

Leu His Asn Ile Ile Leu Tyr Gly Met Leu Thr Ile Leu Cys Phe Gly  
130 135 140

Asn Tyr Leu His Gly Tyr Thr Arg Ala Gly Leu Ala Thr Leu Pro Leu  
145 150 155 160

Ala Leu Cys Met Leu Val Tyr Ile Phe Ala Phe Leu Val Leu Cys Leu  
165 170 175

Leu Leu Met Phe Phe Val Ser Leu Lys Gln Val Met Thr Ala Gly Leu  
180 185 190

Ile His Tyr Asn Gln Gln Leu Cys Gln Gly Asp Leu Ile Ser Gly Leu  
195 200 205

Arg Gly Arg Gln Gln Ile Leu Lys Leu Cys Gly Gly Glu Leu Asn Glu  
210 215 220

Cys Phe Gly Leu Leu Met Leu Pro Ile Val Ala Leu Val Leu Leu Met  
225 230 235 240

Ala Pro Ser Gly Pro Phe Phe Leu Ile Ser Thr Val Leu Glu Gly Lys  
245 250 255

Phe Arg Pro Asp Glu Cys Leu Ile Met Leu Leu Thr Ser Ser Thr Trp  
260 265 270

Asp Thr Pro Trp Met Ile Met Leu Val Leu Met Leu Arg Thr Asn Gly  
275 280 285

Ile Ser Glu Glu Ala Asn Lys Thr Ala Lys Met Leu Thr Lys Val Pro  
290 295 300

Arg Thr Gly Thr Gly Leu Asp Arg Met Ile Glu Lys Phe Leu Leu Lys  
305 310 315 320

Asn Leu Arg Gln Lys Pro Ile Leu Thr Ala Tyr Gly Phe Phe Ala Leu  
325 330 335

Asp Lys Ser Thr Leu Phe Lys Leu Phe Thr Ala Ile Phe Thr Tyr Met  
340 345 350

Val Ile Leu Val Gln Phe Lys Glu Met Glu Asn Ser Thr Lys Ser Ile  
355 360 365

Asn Lys Phe  
370

<210> 34  
<211> 379  
<212> PRT  
<213> Drosophila melanogaster  
  
<400> 34

Met Lys Ser Ala Thr Ser Lys Val Val Thr Ala Leu Asp Val Ser Val  
1 5 10 15

Val Val Met Ala Ile Val Ser Gly Val Tyr Cys Gly Leu Phe Ser Leu  
20 25 30

Asn Asp Thr Leu Glu Leu Asn Asp Arg Leu Asn Lys Ile Asp Asn Thr  
35 40 45

Leu Asn Ala Tyr Asn Asn Phe Arg Arg Asp Arg Trp Arg Ala Leu Gly  
50 55 60

Met Ala Ala Val Ser Leu Leu Ala Ile Ser Ile Leu Val Gly Leu Asp  
65 70 75 80

Val Gly Thr Trp Met Arg Ile Ala Gln Asp Met Asn Ile Ala Gln Ser  
85 90 95

Asp Thr Glu Leu Asn Val His Trp Tyr Ile Pro Phe Tyr Ser Leu Tyr  
100 105 110

Phe Ile Leu Thr Gly Leu Gln Val Asn Ile Ala Asn Thr Ala Tyr Gly  
115 120 125

Leu Gly Arg Arg Phe Gly Arg Leu Asn Arg Met Leu Ser Ser Ser Phe  
130 135 140

Leu Ala Glu Asn Asn Ala Thr Ser Ala Ile Lys Pro Gln Lys Val Ser  
145 150 155 160

Thr Val Lys Asn Val Ser Val Asn Arg Pro Ala Met Pro Ser Ala Leu  
165 170 175

His Ala Ser Leu Thr Lys Leu Asn Gly Glu Thr Leu Pro Ser Ala Leu  
180 185 190

Ala Gly Asp Lys Ala Ala Ala Arg Ser Leu Ile Leu Asn Val Glu Leu  
195 200 205

Leu Lys Leu Gly Tyr Phe Pro Ala Lys Asn Lys Gly Leu Leu Leu Lys  
210 215 220

Ser Leu Ala Asp Ser His Glu Ser Leu Gly Lys Cys Val His Leu Leu  
225 230 235 240

Ser Asn Ser Phe Gly Ile Ala Val Leu Phe Ile Leu Val Ser Cys Leu



Cys Val Lys Ser Cys Trp Glu Lys Ala Gln Gly Ile Arg Asn Leu Ala  
 85 90 95

Arg Gly Leu Val Thr Met Glu Gln Lys Tyr Phe Ala Gly Arg Pro Ser  
 100 105 110

Gly Leu Leu Leu Lys Cys Arg Tyr Tyr Ile Lys Ile Thr Phe Gly Ser  
 115 120 125

Ile Thr Leu Leu Arg Ile His Leu Ile Gln Pro Ile Tyr Met Arg Arg  
 130 135 140

Leu Leu Pro Ser Gln Phe Tyr Leu Asn Val Gly Ala Tyr Trp Leu Leu  
 145 150 155 160

Tyr Asn Met Leu Leu Ala Ala Val Leu Gly Phe Tyr Phe Leu Leu Trp  
 165 170 175

Glu Met Cys Arg Ile Gln Lys Leu Ile Asn Asp Gln Met Thr Leu Ile  
 180 185 190

Leu Ala Arg Ser Gly Gln Arg Asn Arg Leu Lys Lys Met Gln His Cys  
 195 200 205

Leu Arg Leu Tyr Ser Lys Leu Leu Leu Leu Cys Asp Gln Phe Asn Ser  
 210 215 220

Gln Leu Gly His Val Ala Ile Trp Val Leu Ala Cys Lys Ser Trp Cys  
 225 230 235 240

Gln Ile Thr Phe Gly Tyr Glu Ile Phe Gln Met Val Ala Ala Pro Lys  
 245 250 255

Ser Ile Asp Leu Thr Met Ser Met Arg Val Phe Val Ile Phe Thr Tyr  
 260 265 270

Ile Phe Asp Ala Met Asn Leu Phe Leu Gly Thr Asp Ile Ser Glu Leu  
 275 280 285

Phe Ser Thr Phe Arg Ala Asp Ser Gln Arg Ile Leu Arg Glu Thr Ser  
 290 295 300

Arg Leu Asp Arg Leu Leu Ser Met Phe Ala Leu Lys Leu Ala Leu His  
 305 310 315 320

Pro Lys Arg Val Val Leu Leu Asn Val Phe Thr Phe Asp Arg Lys Leu  
325 330 335

Thr Leu Thr Leu Leu Ala Lys Ser Thr Leu Tyr Thr Ile Cys Cys Leu  
340 345 350

Gln Asn Asp Tyr Asn Lys Leu Lys Ala  
355 360

<210> 36

<211> 395

<212> PRT

<213> Drosophila melanogaster

<400> 36

Met Leu Leu Lys Phe Met Tyr Ile Tyr Gly Ile Gly Cys Gly Leu Met  
1 5 10 15

Pro Ala Pro Leu Lys Lys Gly Gln Phe Leu Leu Gly Tyr Lys Gln Arg  
20 25 30

Trp Tyr Leu Ile Tyr Thr Ala Cys Leu His Gly Gly Leu Leu Thr Val  
35 40 45

Leu Pro Phe Thr Phe Pro His Tyr Met Tyr Asp Asp Ser Tyr Met Ser  
50 55 60

Ser Asn Pro Val Leu Lys Trp Thr Phe Asn Leu Thr Asn Ile Thr Arg  
65 70 75 80

Ile Met Ala Met Phe Ser Gly Val Leu Leu Met Trp Phe Arg Arg Lys  
85 90 95

Arg Ile Leu Asn Leu Gly Glu Asn Leu Ile Leu His Cys Leu Lys Cys  
100 105 110

Lys Thr Leu Asp Asn Arg Ser Lys Lys Tyr Ser Lys Leu Arg Lys Arg  
115 120 125

Val Arg Asn Val Leu Phe Gln Met Leu Leu Val Ala Asn Leu Ser Ile  
130 135 140

Leu Leu Gly Ala Leu Ile Leu Phe Arg Ile His Ser Val Gln Arg Ile  
145 150 155 160

Ser Lys Thr Ala Met Ile Val Ala His Ile Thr Gln Phe Ile Tyr Val  
165 170 175

Val Phe Met Met Thr Gly Ile Cys Val Ile Leu Leu Val Leu His Trp  
180 185 190

Gln Ser Glu Arg Leu Gln Ile Ala Leu Lys Asp Leu Cys Ser Phe Leu  
195 200 205

Asn His Glu Glu Arg Asn Ser Leu Thr Leu Ser Glu Asn Lys Ala Asn  
210 215 220

Arg Ser Leu Gly Lys Leu Ala Lys Leu Phe Lys Leu Phe Ala Glu Asn  
225 230 235 240

Gln Arg Leu Val Arg Glu Val Phe Arg Thr Phe Asp Leu Pro Ile Ala  
245 250 255

Leu Leu Leu Leu Lys Met Phe Val Thr Asn Val Asn Leu Val Tyr His  
260 265 270

Gly Val Gln Phe Gly Asn Asp Thr Ile Glu Thr Ser Ser Tyr Thr Arg  
275 280 285

Ile Val Gly Gln Trp Val Val Ile Ser His Tyr Trp Ser Ala Val Leu  
290 295 300

Leu Met Asn Val Val Asp Asp Val Thr Arg Arg Ser Asp Leu Lys Met  
305 310 315 320

Gly Asp Leu Leu Arg Glu Phe Ser His Leu Glu Leu Val Lys Arg Asp  
325 330 335

Phe His Leu Gln Leu Glu Leu Phe Ser Asp His Leu Arg Cys His Pro  
340 345 350

Ser Thr Tyr Lys Val Cys Gly Leu Phe Ile Phe Asn Lys Gln Thr Ser  
355 360 365

Leu Ala Tyr Phe Phe Tyr Val Leu Val Gln Val Leu Val Leu Val Gln  
370 375 380

Phe Asp Leu Lys Asn Lys Val Glu Lys Arg Asn  
385 390 395

<210> 37  
<211> 408  
<212> PRT



<213> Drosophila melanogaster

<400> 37

Met Leu His Pro Lys Leu Gly Arg Val Met Asn Val Val Tyr Tyr His  
1 5 10 15

Ser Val Val Phe Ala Leu Met Ser Thr Thr Leu Arg Ile Arg Ser Cys  
20 25 30

Arg Lys Cys Leu Arg Leu Glu Lys Val Ser Arg Thr Tyr Thr Ile Tyr  
35 40 45

Ser Phe Phe Val Gly Ile Phe Leu Phe Leu Asn Leu Tyr Phe Met Val  
50 55 60

Pro Arg Ile Met Glu Asp Gly Tyr Met Lys Tyr Asn Ile Val Leu Gln  
65 70 75 80

Trp Asn Phe Phe Val Met Leu Phe Leu Arg Ala Ile Ala Val Val Ser  
85 90 95

Cys Tyr Gly Thr Leu Trp Leu Lys Arg His Lys Ile Ile Gln Leu Tyr  
100 105 110

Lys Tyr Ser Leu Ile Tyr Trp Lys Arg Phe Gly His Ile Thr Arg Ala  
115 120 125

Ile Val Asp Lys Lys Glu Leu Leu Asp Leu Gln Glu Ser Leu Ala Arg  
130 135 140

Ile Met Ile Arg Lys Ile Ile Leu Leu Tyr Ser Ala Phe Leu Cys Ser  
145 150 155 160

Thr Val Leu Gln Tyr Gln Leu Leu Ser Val Ile Asn Pro Gln Ile Phe  
165 170 175

Leu Ala Phe Cys Ala Arg Leu Thr His Phe Leu His Phe Leu Cys Val  
180 185 190

Lys Met Gly Phe Phe Gly Val Leu Val Leu Leu Asn His Gln Phe Leu  
195 200 205

Val Ile His Leu Ala Ile Asn Ala Leu His Gly Arg Lys Ala Arg Lys  
210 215 220

Lys Trp Lys Ala Leu Arg Ser Val Ala Ala Met His Leu Lys Thr Leu

225                      230                      235                      240

Arg Leu Ala Arg Arg Ile Phe Asp Met Phe Asp Ile Ala Asn Ala Thr  
                                245                      250                      255

Val Phe Ile Asn Met Phe Met Thr Ala Ile Asn Ile Leu Tyr His Ala  
                                260                      265                      270

Val Gln Tyr Ser Asn Ser Ser Ile Lys Ser Asn Gly Trp Gly Ile Leu  
                                275                      280                      285

Phe Gly Asn Gly Leu Ile Val Phe Asn Phe Trp Gly Thr Met Ala Leu  
                                290                      295                      300

Met Glu Met Leu Asp Ser Val Val Thr Ser Cys Asn Asn Thr Gly Gln  
305                      310                      315

Gln Leu Arg Gln Leu Ser Asp Leu Pro Lys Val Gly Pro Lys Met Gln  
                                325                      330                      335

Arg Glu Leu Asp Tyr Phe Thr Met Gln Leu Arg Gln Asn Arg Leu Val  
                                340                      345                      350

Tyr Lys Ile Cys Gly Ile Val Glu Leu Asp Lys Pro Ala Cys Leu Ser  
                                355                      360                      365

Tyr Ile Gly Ser Ile Leu Ser Asn Val Ile Ile Leu Met Gln Phe Asp  
370                      375                      380

Leu Arg Arg Gln Arg Gln Pro Ile Asn Asp Arg Gln Tyr Leu Ile His  
385                      390                      395                      400

Leu Met Lys Asn Lys Thr Lys Val  
                                405

<210> 38  
<211> 412  
<212> FRT  
<213> Drosophila melanogaster

<400> 38

Met Asn Gln Tyr Phe Leu Leu His Thr Tyr Phe Gln Val Ser Arg Leu  
1                      5                      10                      15

Ile Gly Leu Cys Asn Leu His Tyr Asp Ser Ser Asn His Arg Phe Ile  
                                20                      25                      30

Leu Asn His Val Pro Thr Val Val Tyr Cys Val Ile Leu Asn Val Val  
35 40 45

Tyr Leu Leu Val Leu Pro Phe Ala Leu Phe Val Leu Thr Gly Asn Ile  
50 55 60

Tyr His Cys Pro Asp Ala Gly Met Phe Gly Val Val Tyr Asn Val Val  
65 70 75 80

Ala Leu Thr Lys Leu Leu Thr Met Leu Phe Leu Met Ser Ser Val Trp  
85 90 95

Ile Gln Arg Arg Arg Leu Tyr Lys Leu Gly Asn Asp Leu Met Lys Met  
100 105 110

Leu His Lys Phe Arg Phe Asn Leu Gly Asn Asp Cys Arg Asn Arg Cys  
115 120 125

Leu Cys Lys Gly Leu Leu Thr Ser Ser Arg Phe Val Leu Leu Thr Gln  
130 135 140

Gln Leu Leu Thr Arg Asp Ser Val Val Asn Cys Glu Ser Asn Ser Ser  
145 150 155 160

Leu Arg Gln Ala Met Val Pro Tyr Gln Ser Ala Ala Ile Val Tyr Ala  
165 170 175

Leu Ile Met Ile Leu Leu Met Ser Tyr Val Asp Met Thr Val Tyr Met  
180 185 190

Val Glu Val Ala Gly Asn Trp Leu Leu Val Asn Met Thr Gln Gly Val  
195 200 205

Arg Glu Met Val Gln Asp Leu Glu Val Leu Pro Glu Arg Asn Gly Ile  
210 215 220

Pro Arg Glu Met Gly Leu Met Gln Ile Leu Ala Ala Trp Arg Lys Leu  
225 230 235 240

Trp Arg Arg Cys Arg Arg Leu Asp Ala Leu Leu Lys Gln Phe Val Asp  
245 250 255

Ile Phe Gln Trp Gln Val Leu Phe Asn Leu Leu Thr Thr Tyr Ile Phe  
260 265 270

Ser Ile Ala Val Leu Phe Arg Leu Trp Ile Tyr Leu Glu Phe Asp Lys  
275 280 285

Asn Phe His Leu Trp Lys Gly Ile Leu Tyr Ala Ile Ile Phe Leu Thr  
290 295 300

His His Val Glu Ile Val Met Gln Phe Ser Ile Phe Glu Ile Asn Arg  
305 310 315 320

Cys Lys Trp Leu Gly Leu Leu Glu Asp Val Gly Asn Leu Trp Asp Ile  
325 330 335

Asn Tyr Ser Gly Arg Gln Cys Ile Lys Ser Ser Gly Thr Ile Leu Ser  
340 345 350

Arg Lys Leu Glu Phe Ser Leu Leu Tyr Met Asn Arg Lys Leu Gln Leu  
355 360 365

Asn Pro Lys Arg Val Arg Arg Leu His Ile Val Gly Leu Phe Asp Ile  
370 375 380

Ser Asn Leu Thr Val His Asn Met Thr Arg Ser Ile Ile Thr Asn Val  
385 390 395 400

Leu Val Leu Cys Gln Ile Ala Tyr Lys Lys Tyr Gly  
405 410

<210> 39

<211> 390

<212> PRT

<213> Drosophila melanogaster

<400> 39

Met Ala Asp Leu Leu Lys Leu Cys Leu Arg Ile Ala Tyr Ala Tyr Gly  
1 5 10 15

Arg Leu Thr Gly Val Ile Asn Phe Lys Ile Asp Leu Lys Thr Gly Gln  
20 25 30

Ala Leu Val Thr Arg Gly Ala Thr Leu Ile Ser Val Ser Thr His Leu  
35 40 45

Leu Ile Phe Ala Leu Leu Leu Tyr Gln Thr Met Arg Lys Ser Val Val  
50 55 60

Asn Val Met Trp Lys Tyr Ala Asn Ser Leu His Glu Tyr Val Phe Leu  
65 70 75 80

Val Ile Ala Gly Phe Arg Val Val Cys Val Phe Leu Glu Leu Val Ser  
85 90 95

Arg Trp Ser Gln Arg Arg Thr Phe Val Arg Leu Phe Asn Ser Phe Arg  
100 105 110

Arg Leu Tyr Gln Arg Asn Pro Asp Ile Ile Gln Tyr Cys Arg Arg Ser  
115 120 125

Ile Val Ser Lys Phe Phe Cys Val Thr Met Thr Glu Thr Leu His Ile  
130 135 140

Ile Val Thr Leu Ala Met Met Arg Asn Arg Leu Ser Ile Ala Leu Ala  
145 150 155 160

Leu Arg Ile Trp Ala Val Leu Ser Leu Thr Ala Ile Ile Asn Val Ile  
165 170 175

Ile Thr Gln Tyr Tyr Val Ala Thr Ala Cys Val Arg Gly Arg Tyr Ala  
180 185 190

Leu Leu Asn Lys Asp Leu Gln Ala Ile Val Thr Glu Ser Gln Ser Leu  
195 200 205

Val Pro Asn Gly Gly Gly Val Phe Val Thr Lys Cys Cys Tyr Leu Ala  
210 215 220

Asp Arg Leu Glu Arg Ile Ala Lys Ser Gln Ser Asp Leu Gln Glu Leu  
225 230 235 240

Val Glu Asn Leu Ser Thr Ala Tyr Glu Gly Glu Val Val Cys Leu Val  
245 250 255

Ile Thr Tyr Tyr Leu Asn Met Leu Gly Thr Ser Tyr Leu Phe Ser  
260 265 270

Ile Ser Lys Tyr Gly Asn Phe Gly Asn Asn Leu Leu Val Ile Ile Thr  
275 280 285

Leu Cys Gly Ile Val Tyr Phe Val Phe Tyr Val Val Asp Cys Trp Ile  
290 295 300

Asn Ala Phe Asn Val Phe Tyr Leu Leu Asp Ala His Asp Lys Met Val  
305 310 315 320

Lys Leu Leu Asn Lys Arg Thr Leu Phe Gln Pro Gly Leu Asp His Arg  
325 330 335

Leu Glu Met Val Phe Glu Asn Phe Ala Leu Asn Leu Val Arg Asn Pro  
340 345 350

Leu Lys Leu His Met Tyr Gly Leu Phe Glu Phe Gly Arg Gly Thr Ser  
355 360 365

Phe Ala Val Phe Asn Ser Leu Leu Thr His Ser Leu Leu Ile Gln  
370 375 380

Tyr Asp Val Gln Asn Phe  
385 390

<210> 40

<211> 394

<212> PRT

<213> Drosophila melanogaster

<400> 40

Met Val Asp Leu Val Lys Thr Ile Leu Leu Ile Ala Tyr Trp Tyr Gly  
1 5 10 15

Leu Ala Val Gly Val Ser Asn Phe Glu Val Asp Trp Leu Thr Gly Glu  
20 25 30

Ala Ile Ala Thr Arg Arg Thr Thr Ile Tyr Ala Ala Val His Asn Ala  
35 40 45

Ser Leu Ile Thr Leu Leu Ile Leu Phe Asn Leu Gly Asn Asn Ser Leu  
50 55 60

Lys Ser Glu Phe Ile Ser Ala Arg Tyr Leu His Glu Tyr Phe Phe Met  
65 70 75 80

Leu Met Thr Ala Val Arg Ile Ser Ala Val Leu Leu Ser Leu Ile Thr  
85 90 95

Arg Trp Tyr Gln Arg Ser Arg Phe Ile Arg Ile Trp Asn Gln Ile Leu  
100 105 110

Ala Leu Val Arg Asp Arg Pro Gln Val Val Arg Gly Arg Trp Tyr Arg  
115 120 125

Arg Ser Ile Ile Leu Lys Phe Val Phe Cys Val Leu Ser Asp Ser Leu

130

135

140

His Thr Ile Ser Asp Val Ser Ala Gln Arg Lys Arg Ile Thr Ala Asp  
145 150 155 160

Leu Ile Val Lys Leu Ser Leu Leu Ala Thr Leu Thr Thr Ile Phe Asn  
165 170 175

Met Ile Val Cys Gln Tyr Tyr Leu Ala Met Val Gln Val Ile Gly Leu  
180 185 190

Tyr Lys Ile Leu Leu Gln Asp Leu Arg Cys Leu Val Arg Gln Ala Glu  
195 200 205

Cys Ile Cys Ser Ile Arg Asn Arg Arg Gly Gly Val Tyr Ser Ile Gln  
210 215 220

Cys Cys Ser Leu Ala Asp Gln Leu Asp Leu Ile Ala Glu Arg His Tyr  
225 230 235 240

Phe Leu Lys Asp Arg Leu Asp Glu Met Ser Asp Leu Phe Gln Ile Gln  
245 250 255

Ser Leu Ser Met Ser Leu Val Tyr Phe Phe Ser Thr Met Gly Ser Ile  
260 265 270

Tyr Phe Ser Val Cys Ser Ile Leu Tyr Ser Ser Thr Gly Phe Gly Ser  
275 280 285

Thr Tyr Trp Gly Leu Leu Leu Ile Val Leu Ser Thr Ala Ser Phe Tyr  
290 295 300

Met Asp Asn Trp Leu Ser Val Asn Ile Gly Phe His Ile Arg Asp Gln  
305 310 315 320

Gln Asp Glu Leu Phe Arg Val Leu Ala Asp Arg Thr Leu Phe Tyr Arg  
325 330 335

Glu Leu Asp Asn Arg Leu Glu Ala Ala Phe Glu Asn Phe Gln Leu Gln  
340 345 350

Leu Ala Ser Asn Arg His Glu Phe Tyr Val Met Gly Leu Phe Lys Met  
355 360 365

Glu Arg Gly Arg Leu Ile Ala Met Leu Ser Ser Val Ile Thr His Thr  
370 375 380

Met Val Leu Val Gln Trp Glu Ile Gln Asn  
385 390

<210> 41  
<211> 405  
<212> PRT  
<213> Drosophila melanogaster

<400> 41

Met Arg Ser Ser Ala Thr Lys Gly Ala Lys Leu Lys Asn Ser Pro Arg  
1 5 10 15

Glu Arg Leu Ser Ser Phe Asn Pro Gln Tyr Ala Glu Arg Tyr Lys Glu  
20 25 30

Leu Tyr Arg Thr Leu Phe Trp Leu Leu Leu Ile Ser Val Leu Ala Asn  
35 40 45

Thr Ala Pro Ile Thr Ile Leu Pro Gly Cys Pro Asn Arg Phe Tyr Arg  
50 55 60

Leu Val His Leu Ser Trp Met Ile Leu Trp Tyr Gly Leu Phe Val Leu  
65 70 75 80

Gly Ser Tyr Trp Glu Phe Val Leu Val Thr Thr Gln Arg Val Ser Leu  
85 90 95

Asp Arg Tyr Leu Asn Ala Ile Glu Ser Ala Ile Tyr Val Val His Ile  
100 105 110

Phe Ser Ile Met Leu Leu Thr Trp Gln Cys Arg Asn Trp Ala Pro Lys  
115 120 125

Leu Met Thr Asn Ile Val Thr Ser Asp Leu Asn Arg Ala Tyr Thr Ile  
130 135 140

Asp Cys Asn Arg Thr Lys Arg Phe Ile Arg Leu Gln Leu Phe Leu Val  
145 150 155 160

Gly Ile Phe Ala Cys Leu Ala Ile Phe Phe Asn Ile Trp Thr His Lys  
165 170 175

Phe Val Val Tyr Arg Ser Ile Leu Ser Ile Asn Ser Tyr Val Met Pro  
180 185 190



Asn Ile Ile Ser Ser Ile Ser Phe Ala Gln Tyr Tyr Leu Leu Leu Gln  
195 200 205

Gly Ile Ala Trp Arg Gln Arg Arg Leu Thr Glu Gly Leu Glu Arg Glu  
210 215 220

Leu Thr His Leu His Ser Pro Arg Ile Ser Glu Val Gln Lys Ile Arg  
225 230 235 240

Met His His Ala Asn Leu Ile Asp Phe Thr Lys Ala Val Asn Arg Thr  
245 250 255

Phe Gln Tyr Ser Ile Leu Leu Leu Phe Val Gly Cys Phe Leu Asn Phe  
260 265 270

Asn Leu Val Leu Phe Leu Val Tyr Gln Gly Ile Glu Asn Pro Ser Met  
275 280 285

Ala Asp Phe Thr Lys Trp Val Cys Met Leu Leu Trp Leu Ala Met His  
290 295 300

Val Gly Lys Val Cys Ser Ile Leu His Phe Asn Gln Ser Ile Gln Asn  
305 310 315 320

Glu His Ser Thr Cys Leu Thr Leu Leu Ser Arg Val Ser Tyr Ala Arg  
325 330 335

Lys Asp Ile Gln Asp Thr Ile Thr His Phe Ile Ile Gln Met Arg Thr  
340 345 350

Asn Val Arg Gln His Val Val Cys Gly Val Ile Asn Leu Asp Leu Lys  
355 360 365

Phe Leu Thr Thr Leu Leu Val Ala Ser Ala Asp Phe Phe Ile Phe Leu  
370 375 380

Leu Gln Tyr Asp Val Thr Tyr Glu Ala Leu Ser Lys Ser Val Gln Gly  
385 390 395 400

Asn Val Thr Arg Tyr  
405

<210> 42  
<211> 399  
<212> PRT  
<213> Drosophila melanogaster

<400> 42

Met Asp Ser Ser Tyr Trp Glu Asn Leu Leu Thr Ile Asn Arg Phe  
1 5 10 15

Leu Gly Val Tyr Pro Ser Gly Arg Val Gly Val Leu Arg Trp Leu His  
20 25 30

Thr Leu Trp Ser Leu Phe Leu Leu Met Tyr Ile Trp Thr Gly Ser Ile  
35 40 45

Val Lys Cys Leu Glu Phe Thr Val Glu Ile Pro Thr Ile Glu Lys Leu  
50 55 60

Leu Tyr Leu Met Glu Phe Pro Gly Asn Met Ala Thr Ile Ala Ile Leu  
65 70 75 80

Val Tyr Tyr Ala Val Leu Asn Arg Pro Leu Ala His Gly Ala Glu Leu  
85 90 95

Gln Ile Glu Arg Ile Ile Thr Gly Leu Lys Gly Lys Ala Lys Arg Leu  
100 105 110

Val Tyr Lys Arg His Gly Gln Arg Thr Leu His Leu Met Ala Thr Thr  
115 120 125

Leu Val Phe His Gly Leu Cys Val Leu Val Asp Val Val Asn Tyr Asp  
130 135 140

Phe Glu Phe Trp Thr Thr Trp Ser Ser Asn Ser Val Tyr Asn Leu Pro  
145 150 155 160

Gly Leu Met Met Ser Leu Gly Val Leu Gln Tyr Ala Gln Pro Val His  
165 170 175

Phe Leu Trp Leu Val Met Asp Gln Met Arg Met Cys Leu Lys Glu Leu  
180 185 190

Lys Leu Leu Gln Arg Pro Pro Gln Gly Ser Thr Lys Leu Asp Ala Cys  
195 200 205

Tyr Glu Ser Ala Phe Ala Val Leu Val Asp Ala Gly Gly Gly Ser Ala  
210 215 220

Leu Met Ile Glu Glu Met Arg Tyr Thr Cys Asn Leu Ile Glu Gln Val  
225 230 235 240

His Ser Gln Phe Leu Leu Arg Phe Gly Leu Tyr Leu Val Leu Asn Leu  
245 250 255

Leu Asn Ser Leu Val Ser Ile Cys Val Glu Leu Tyr Leu Ile Phe Asn  
260 265 270

Phe Phe Glu Thr Pro Leu Trp Glu Glu Ser Val Leu Leu Val Tyr Arg  
275 280 285

Leu Leu Trp Leu Ala Met His Gly Gly Arg Ile Trp Phe Ile Leu Ser  
290 295 300

Val Asn Glu Gln Ile Leu Glu Gln Lys Cys Asn Leu Cys Gln Leu Leu  
305 310 315 320

Asn Glu Leu Glu Val Cys Ser Ser Arg Leu Gln Arg Thr Ile Asn Arg  
325 330 335

Phe Leu Leu Gln Leu Gln Arg Ser Ile Asp Gln Pro Leu Glu Ala Cys  
340 345 350

Gly Ile Val Thr Leu Asp Thr Arg Ser Leu Gly Gly Phe Ile Gly Val  
355 360 365

Leu Met Ala Ile Val Ile Phe Leu Ile Gln Ile Gly Leu Gly Asn Lys  
370 375 380

Ser Leu Met Gly Val Ala Leu Asn Arg Ser Asn Trp Val Tyr Val  
385 390 395

<210> 43

<211> 392

<212> PRT

<213> Drosophila melanogaster

<400> 43

Met Lys Ile Tyr Gln Asp Ile Tyr Pro Ile Ser Lys Pro Ser Gln Ile  
1 5 10 15

Phe Ala Ile Leu Pro Phe Tyr Ser Gly Asp Val Asp Asp Gly Phe Arg  
20 25 30

Phe Gly Gly Leu Gly Arg Trp Tyr Gly Arg Leu Val Ala Leu Ile Ile  
35 40 45

Leu Ile Gly Ser Leu Thr Leu Gly Glu Asp Val Leu Phe Ala Ser Lys

50

55

60

Glu Tyr Arg Leu Val Ala Ser Ala Gln Gly Asp Thr Glu Glu Ile Asn  
65 70 75 80

Arg Thr Ile Glu Thr Leu Leu Cys Ile Ile Ser Tyr Thr Met Val Val  
85 90 95

Leu Ser Ser Val Gln Asn Ala Ser Arg His Phe Arg Thr Leu His Asp  
100 105 110

Ile Ala Lys Ile Asp Glu Tyr Leu Leu Ala Asn Gly Phe Arg Glu Thr  
115 120 125

Tyr Ser Cys Arg Asn Leu Thr Ile Leu Val Thr Ser Ala Ala Gly Gly  
130 135 140

Val Leu Ala Val Ala Phe Tyr Tyr Ile His Tyr Arg Ser Gly Ile Gly  
145 150 155 160

Ala Lys Arg Gln Ile Ile Leu Leu Leu Ile Tyr Phe Leu Gln Leu Leu  
165 170 175

Tyr Ser Thr Leu Leu Ala Leu Tyr Leu Arg Thr Leu Met Met Asn Leu  
180 185 190

Ala Gln Arg Ile Gly Phe Leu Asn Gln Lys Leu Asp Thr Phe Asn Leu  
195 200 205

Gln Asp Cys Gly His Met Glu Asn Trp Arg Glu Leu Ser Asn Leu Ile  
210 215 220

Glu Val Leu Cys Lys Phe Arg Tyr Ile Thr Glu Asn Ile Asn Cys Val  
225 230 235 240

Ala Gly Val Ser Leu Leu Phe Tyr Phe Gly Phe Ser Phe Tyr Thr Val  
245 250 255

Thr Asn Gln Ser Tyr Leu Ala Phe Ala Thr Leu Thr Ala Gly Ser Leu  
260 265 270

Ser Ser Lys Thr Glu Val Ala Asp Thr Ile Gly Leu Ser Cys Ile Trp  
275 280 285

Val Leu Ala Glu Thr Ile Thr Met Ile Val Ile Cys Ser Ala Cys Asp  
290 295 300

Gly Leu Ala Ser Glu Val Asn Gly Thr Ala Gln Ile Leu Ala Arg Ile  
305 310 315 320

Tyr Gly Lys Ser Lys Gln Phe Gln Asn Leu Ile Asp Lys Phe Leu Thr  
325 330 335

Lys Ser Ile Lys Gln Asp Leu Gln Phe Thr Ala Tyr Gly Phe Phe Ser  
340 345 350

Ile Asp Asn Ser Thr Leu Phe Lys Ile Phe Ser Ala Val Thr Thr Tyr  
355 360 365

Leu Val Ile Leu Ile Gln Phe Lys Gln Leu Glu Asp Ser Lys Asn Leu  
370 375 380

Ser Arg Ser Tyr Gln Leu Val Met  
385 390

<210> 44  
<211> 424  
<212> PRT  
<213> Drosophila melanogaster

<400> 44

Met Pro Arg Trp Leu Gln Leu Pro Gly Met Ser Ala Leu Gly Ile Leu  
1 5 10 15

Tyr Ser Leu Thr Arg Val Phe Gly Leu Met Ala Thr Ala Asn Trp Ser  
20 25 30

Pro Arg Gly Ile Lys Arg Val Arg Gln Ser Leu Tyr Leu Arg Ile His  
35 40 45

Gly Cys Val Met Leu Ile Phe Val Gly Cys Phe Ser Pro Phe Ala Phe  
50 55 60

Trp Cys Ile Phe Gln Arg Met Ala Phe Leu Arg Gln Asn Arg Ile Leu  
65 70 75 80

Leu Met Ile Gly Phe Asn Arg Tyr Val Leu Leu Leu Val Cys Ala Phe  
85 90 95

Met Thr Leu Trp Ile His Cys Phe Lys Gln Ala Glu Ile Ile Gly Cys  
100 105 110

Leu Asn Arg Leu Leu Lys Cys Arg Arg Arg Leu Arg Arg Leu Met His  
115 120 125

Thr Arg Lys Leu Lys Asp Ser Met Asp Cys Leu Ala Thr Lys Gly His  
130 135 140

Leu Leu Glu Val Val Val Leu Leu Ser Ser Tyr Leu Leu Ser Met Ala  
145 150 155 160

Gln Pro Ile Gln Ile Leu Lys Asp Asp Pro Glu Val Arg Arg Asn Phe  
165 170 175

Met Tyr Ala Cys Ser Leu Val Phe Val Ser Val Cys Gln Ala Ile Leu  
180 185 190

Gln Leu Ser Leu Gly Met Tyr Thr Met Ala Ile Leu Phe Leu Gly His  
195 200 205

Leu Val Arg His Ser Asn Leu Leu Leu Ala Lys Ile Leu Ala Asp Ala  
210 215 220

Glu His Ile Phe Glu Ser Ser Gln Lys Ala Gly Phe Trp Pro Asn Arg  
225 230 235 240

Gln Glu Leu Tyr Lys Gly Gln Gln Lys Trp Leu Ala Leu Glu Leu Trp  
245 250 255

Arg Leu Leu His Val His His Gln Leu Leu Lys Leu His Arg Ser Ile  
260 265 270

Cys Ser Leu Cys Ala Val Gln Ala Val Cys Phe Leu Gly Phe Val Pro  
275 280 285

Leu Glu Cys Thr Ile His Leu Phe Phe Thr Tyr Phe Met Lys Tyr Ser  
290 295 300

Lys Phe Ile Leu Arg Lys Tyr Gly Arg Ser Phe Pro Leu Asn Tyr Phe  
305 310 315 320

Ala Ile Ala Phe Leu Val Gly Leu Phe Thr Asn Leu Leu Leu Val Ile  
325 330 335

Leu Pro Thr Tyr Tyr Ser Glu Arg Arg Phe Asn Cys Thr Arg Glu Ile  
340 345 350

Ile Lys Gly Gly Gly Leu Ala Phe Pro Ser Arg Ile Thr Val Lys Gln

355

360

365

Leu Arg His Thr Met His Phe Tyr Gly Leu Tyr Leu Lys Asn Val Glu  
370 375 380

His Val Phe Ala Val Ser Ala Cys Gly Leu Phe Lys Leu Asn Asn Ala  
385 390 395 400

Ile Leu Phe Cys Ile Val Gly Ala Ile Leu Glu Tyr Leu Met Ile Leu  
405 410 415

Ile Gln Phe Asp Lys Val Leu Asn  
420

&lt;210&gt; 45

&lt;211&gt; 92

&lt;212&gt; PRT

<213> *Drosophila melanogaster*

&lt;400&gt; 45

Cys Gln Leu Leu Asn Gly Tyr Arg Thr Glu His Ala Gly Gly Asn Tyr  
1 5 10 15

Leu Leu Ala Ser Asp Phe Asp Arg Arg Leu Lys Val Phe Leu Gln Trp  
20 25 30

Lys Thr Ser Asp Ser Ala Glu Ser Ala Ser Gly Arg Leu Gly Ser Gln  
35 40 45

Tyr Thr Phe Val Gly His Lys Lys Lys Gln Thr Gly Leu Thr Ile Lys  
50 55 60

Leu Ala Glu Asn Gly Phe Cys Cys Trp Val Leu Leu Arg Tyr Phe  
65 70 75 80

Ser Val Leu Ile Lys Ile Val Lys Tyr Lys Ile Pro  
85 90

&lt;210&gt; 46

&lt;211&gt; 416

&lt;212&gt; PRT

<213> *Drosophila melanogaster*

&lt;400&gt; 46

Met Ala Val Leu Tyr Phe Phe Arg Glu Pro Glu Thr Val Phe Asp Cys  
1 5 10 15

Ala Ala Phe Ile Cys Ile Leu Gln Phe Leu Met Gly Cys Asn Gly Tyr  
20 25 30

Gly Ile Arg Arg Ser Thr Phe Arg Ile Ser Trp Ala Ser Arg Ile Tyr  
35 40 45

Ser Met Ser Val Ala Ile Ala Ala Phe Cys Cys Leu Phe Gly Ser Leu  
50 55 60

Ser Val Leu Leu Ala Glu Glu Asp Ile Arg Glu Arg Leu Ala Lys Ala  
65 70 75 80

Asp Asn Leu Val Leu Ser Ile Ser Ala Leu Glu Leu Leu Met Ser Thr  
85 90 95

Leu Val Phe Gly Val Thr Val Ile Ser Leu Gln Val Phe Ala Arg Arg  
100 105 110

His Leu Gly Ile Tyr Gln Arg Leu Ala Ala Leu Asp Ala Arg Leu Met  
115 120 125

Ser Asp Phe Gly Ala Asn Leu Asn Tyr Arg Lys Met Leu Arg Lys Asn  
130 135 140

Ile Ala Val Leu Gly Ile Val Thr Thr Ile Tyr Leu Met Ala Ile Asn  
145 150 155 160

Ser Ala Ala Val Gln Val Ala Ser Gly His Arg Ala Leu Phe Leu Leu  
165 170 175

Phe Ala Leu Cys Tyr Thr Ile Val Thr Gly Gly Pro His Phe Thr Gly  
180 185 190

Tyr Val His Met Thr Leu Ala Glu Met Leu Gly Ile Arg Phe Arg Leu  
195 200 205

Leu Gln Gln Leu Leu Gln Pro Glu Phe Leu Asn Trp Arg Phe Pro Gln  
210 215 220

Leu His Val Gln Glu Leu Arg Ile Arg Gln Val Val Ser Met Ile Gln  
225 230 235 240

Glu Leu His Tyr Leu Ile Gln Glu Ile Asn Arg Val Tyr Ala Leu Ser  
245 250 255

Leu Trp Ala Ala Met Ala His Asp Leu Ala Met Ser Thr Ser Glu Leu



260

265

270

Tyr Ile Leu Phe Gly Gln Ser Val Gly Ile Gly Gln Gln Asn Glu Glu  
275 280 285

Glu Asn Gly Ser Cys Tyr Arg Met Leu Gly Tyr Leu Ala Leu Val Met  
290 295 300

Ile Pro Pro Leu Tyr Lys Leu Leu Ile Ala Pro Phe Tyr Cys Asp Arg  
305 310 315 320

Thr Ile Tyr Glu Ala Arg Arg Cys Leu Arg Leu Val Glu Lys Leu Asp  
325 330 335

Asp Trp Phe Pro Gln Lys Ser Ser Leu Arg Pro Leu Val Glu Ser Leu  
340 345 350

Met Ser Trp Arg Ile Gln Ala Lys Ile Gln Phe Thr Ser Gly Leu Asp  
355 360 365

Val Val Leu Ser Arg Lys Val Ile Gly Leu Phe Thr Ser Ile Leu Val  
370 375 380

Asn Tyr Leu Leu Ile Leu Ile Gln Phe Ala Met Thr Gln Lys Met Gly  
385 390 395 400

Glu Gln Ile Glu Gln Gln Lys Ile Ala Leu Gln Glu Trp Ile Gly Phe  
405 410 415

&lt;210&gt; 47

&lt;211&gt; 339

&lt;212&gt; PRT

&lt;213&gt; Drosophila melanogaster

&lt;400&gt; 47

Met Arg Val His Gln Arg Gln Ser Ala Val Ile Ile Gln Met Gly His  
1 5 10 15

Pro Pro Phe Met Ser Leu Lys Gly Gly Lys Ser Gly Phe Gly Ser Ile  
20 25 30

Val Trp Pro Ser Ala Met Arg Glu Val Asn Leu Leu Asn Arg Phe Thr  
35 40 45

Arg Gln Phe Leu Phe Leu Ile Val Leu Val Thr Gln Ile Cys Gly Val  
50 55 60

Ala Thr Phe Val Tyr Asn Ser Lys Ala Gln Cys Phe Arg Gln Ser Gly  
65 70 75 80

Phe Leu Arg Phe Tyr Ser Ser Leu Val Leu Ile Phe Leu Ala Leu Phe  
85 90 95

Leu Ile Val Thr Thr Ser Lys Met Phe His Asn Leu Gln Ala Val Trp  
100 105 110

Pro Tyr Val Val Gly Ser Val Ile Ile Leu Val Val Arg Ile His Gly  
115 120 125

Leu Leu Glu Ser Ala Glu Ile Val Glu Leu Leu Asn Gln Met Leu Arg  
130 135 140

Ile Met Arg Gln Val Asn Leu Met Ala Arg His Pro Asn Leu Phe Arg  
145 150 155 160

Leu Lys His Leu Leu Leu Leu Leu Leu Ala Leu Gln Asn Leu Leu Arg  
165 170 175

Ser Leu Asn Thr Ile Val Gly Ile Ser Asn His Ser Ala Glu Ala Tyr  
180 185 190

Asp Ser Phe Leu Asn Ser Val Ile Leu Leu Ile Ile Leu Ala Val Leu  
195 200 205

Leu Ser Phe Leu Leu Gln Ile Thr Ile Asn Ile Cys Leu Phe Val Val  
210 215 220

Leu Ile Ala Thr Tyr Ser Glu Leu His His Cys Thr Arg Arg Ile Ser  
225 230 235 240

Asn Asp Met Asp Lys Leu Arg Leu His Ser Val His Glu Ser Gly Gln  
245 250 255

Phe Met Val Leu Val Lys Gln Leu Gln Gly Ile Thr Glu Lys Leu Ile  
260 265 270

Arg Leu Arg Gln Asn Val Phe His Ile Thr Val Arg Ile Ile Arg His  
275 280 285

Phe Arg Phe His Trp Leu Cys Ala Ile Ile Tyr Gly Leu Leu Pro Phe  
290 295 300

Phe Ser Leu Thr Ala Lys Asp Gln Asn Gly Phe Asn Phe Leu Ile Ile  
305 310 315 320

Ser Ala Leu Asn Ile Ile Phe Gln Trp Thr Ile Phe Ala Ile Leu Ser  
325 330 335

Arg Glu Ser

<210> 48  
<211> 417  
<212> PRT  
<213> Drosophila melanogaster

<400> 48

Met Thr Gly Lys Arg Ala Glu Ser Trp Ser Arg Leu Leu Leu Leu Trp  
1 5 10 15

Leu Tyr Arg Cys Ala Arg Gly Leu Leu Val Leu Ser Ser Ser Leu Asp  
20 25 30

Arg Asp Lys Leu Gln Leu Lys Ala Thr Lys Gln Gly Ser Arg Asn Arg  
35 40 45

Phe Leu His Ile Leu Trp Arg Cys Ile Val Val Met Ile Tyr Ala Gly  
50 55 60

Leu Trp Pro Met Leu Thr Ser Ala Val Ile Gly Lys Arg Leu Glu Ser  
65 70 75 80

Tyr Ala Asp Val Leu Ala Leu Ala Gln Ser Met Ser Val Ser Ile Leu  
85 90 95

Ala Val Ile Ser Phe Val Ile Gln Ala Arg Gly Glu Asn Gln Phe Arg  
100 105 110

Glu Val Leu Asn Arg Tyr Leu Ala Leu Tyr Gln Arg Ile Cys Leu Thr  
115 120 125

Thr Arg Leu Arg His Leu Phe Pro Thr Lys Phe Val Val Phe Phe Leu  
130 135 140

Leu Lys Leu Phe Phe Thr Leu Cys Gly Cys Phe His Glu Ile Ile Pro  
145 150 155 160

Leu Phe Glu Asn Ser His Phe Asp Asp Ile Ser Gln Met Val Gly Thr  
165 170 175

Gly Phe Gly Ile Tyr Met Trp Leu Gly Thr Leu Cys Val Leu Asp Ala  
180 185 190

Cys Phe Leu Gly Phe Leu Val Ser Gly Ile Leu Tyr Glu His Met Ala  
195 200 205

Asn Asn Ile Ile Ala Met Leu Lys Arg Met Glu Pro Ile Glu Ser Gln  
210 215 220

Asp Glu Arg Tyr Arg Met Thr Lys Tyr Arg Arg Met Gln Leu Leu Cys  
225 230 235 240

Asp Phe Ala Asp Glu Leu Asp Glu Cys Ala Ala Ile Tyr Ser Glu Leu  
245 250 255

Tyr His Val Thr Asn Ser Phe Arg Arg Ile Leu Gln Trp Gln Ile Leu  
260 265 270

Phe Tyr Ile Tyr Leu Asn Phe Ile Asn Ile Cys Leu Met Leu Tyr Gln  
275 280 285

Tyr Ile Leu His Phe Leu Asn Asp Asp Glu Val Val Phe Val Ser Ile  
290 295 300

Val Met Ala Phe Val Lys Leu Ala Asn Leu Val Leu Leu Met Met Cys  
305 310 315 320

Ala Asp Tyr Thr Val Arg Gln Ser Glu Val Pro Lys Lys Leu Pro Leu  
325 330 335

Asp Ile Val Cys Ser Asp Met Asp Glu Arg Trp Asp Lys Ser Val Ser  
340 345 350

Leu Leu Leu Phe Glu Thr Phe Leu Gly Gln Leu Gln Thr Gln Arg Leu  
355 360 365

Glu Ile Lys Val Leu Gly Phe Phe His Leu Asn Asn Glu Phe Ile Leu  
370 375 380

Leu Ile Leu Ser Ala Ile Ile Ser Tyr Leu Phe Ile Leu Ile Gln Phe  
385 390 395 400

Gly Ile Thr Gly Gly Phe Glu Ala Ser Glu Asp Ile Lys Asn Phe Ala  
405 410 415

Asp

<210> 49  
<211> 299  
<212> PRT  
<213> Drosophila melanogaster

<400> 49

Met Gln Phe Trp Phe Gly Glu Glu Leu Ile Asn Leu Val Asn Arg Phe  
1 5 10 15

Leu Gln Leu Phe Arg Arg Met Gln Ser Leu Thr Asn Ser Pro Lys Asn  
20 25 30

Arg Phe Gly Asp Arg Ala Glu Phe Leu Leu Met Phe Ser Lys Val Phe  
35 40 45

Ser Leu Leu Phe Val Phe Met Ala Phe Arg Leu Met Leu Ser Pro Trp  
50 55 60

Phe Leu Leu Thr Leu Val Cys Asp Leu Tyr Thr Ser Val Gly Thr Gly  
65 70 75 80

Met Ile Thr His Leu Cys Phe Val Gly Tyr Leu Ser Ile Gly Val Leu  
85 90 95

Tyr Arg Asp Leu Asn Asn Tyr Val Asp Cys Gln Leu Arg Ala Gln Leu  
100 105 110

Arg Ser Leu Asn Gly Glu Asn Asn Ser Phe Arg Asn Asn Pro Gln Pro  
115 120 125

Thr Arg Gln Ala Ile Ser Asn Leu Asp Lys Cys Leu Tyr Leu Tyr Asp  
130 135 140

Glu Ile His Gln Val Ser Arg Ser Phe Gln Gln Leu Phe Asp Leu Pro  
145 150 155 160

Leu Phe Leu Ser Leu Ala Gln Ser Leu Leu Ala Met Ser Met Val Ser  
165 170 175

Tyr His Ala Ile Leu Arg Arg Gln Tyr Ser Phe Asn Leu Trp Gly Leu  
180 185 190

Val Ile Lys Leu Leu Ile Asp Val Val Leu Leu Thr Met Ser Val His

195

200

205

Ser Ala Val Asn Gly Ser Arg Leu Ile Arg Arg Leu Ser Phe Glu Asn  
210 215 220

Phe Tyr Val Thr Asp Ser Gln Ser Tyr His Gln Lys Val Ser Pro Gly  
225 230 235 240

Ala Ile Ile Leu Arg Ile Lys Tyr Asn Thr Phe Pro Ile Leu Gln Leu  
245 250 255

Glu Leu Phe Leu Gly Arg Leu Gln His Gln Glu Leu Arg Val Phe Pro  
260 265 270

Leu Gly Leu Phe Glu Val Ser Asn Glu Leu Thr Leu Phe Leu Ser  
275 280 285

Ala Met Val Thr Tyr Leu Val Phe Leu Val Gln  
290 295

<210> 50

<211> 407

<212> PRT

<213> Drosophila melanogaster

<400> 50

Met Ile Glu Arg Leu Lys Lys Val Ser Leu Pro Ala Leu Ser Ala Phe  
1 5 10 15

Ile Leu Phe Cys Ser Cys His Tyr Gly Arg Ile Leu Gly Val Ile Cys  
20 25 30

Phe Asp Ile Gly Gln Arg Thr Ser Asp Asp Ser Leu Val Val Arg Asn  
35 40 45

Arg His Gln Phe Lys Trp Phe Cys Leu Ser Cys Arg Leu Ile Ser Val  
50 55 60

Thr Ala Val Cys Cys Phe Cys Ala Pro Tyr Val Ala Asp Ile Glu Asp  
65 70 75 80

Pro Tyr Glu Arg Leu Leu Gln Cys Phe Arg Leu Ser Ala Ser Leu Ile  
85 90 95

Cys Gly Ile Cys Ile Ile Val Val Gln Val Cys Tyr Glu Lys Glu Leu  
100 105 110

Leu Arg Met Ile Ile Ser Phe Leu Arg Leu Phe Arg Arg Val Arg Arg  
115 120 125

Leu Ser Ser Leu Lys Arg Ile Gly Phe Gly Gly Lys Arg Glu Phe Phe  
130 135 140

Leu Leu Leu Phe Lys Phe Ile Cys Leu Val Tyr Glu Leu Tyr Ser Glu  
145 150 155 160

Ile Cys Gln Leu Trp His Leu Pro Asp Ser Leu Ser Leu Phe Ala Thr  
165 170 175

Leu Cys Glu Ile Phe Leu Glu Ile Gly Ser Leu Met Ile Ile His Ile  
180 185 190

Gly Phe Val Gly Tyr Leu Ser Val Ala Ala Leu Tyr Ser Glu Val Asn  
195 200 205

Ser Phe Ala Arg Ile Glu Leu Arg Arg Gln Leu Arg Ser Leu Glu Arg  
210 215 220

Pro Val Gly Gly Pro Val Gly Arg Lys Gln Leu Arg Ile Val Glu Tyr  
225 230 235 240

Arg Val Asp Glu Cys Ile Ser Val Tyr Asp Glu Ile Glu Arg Val Gly  
245 250 255

Arg Thr Phe His Arg Leu Leu Glu Leu Pro Val Leu Ile Ile Leu Leu  
260 265 270

Gly Lys Ile Phe Ala Thr Thr Ile Leu Ser Tyr Glu Val Ile Ile Arg  
275 280 285

Pro Glu Leu Tyr Ala Arg Lys Ile Gly Met Trp Gly Leu Val Val Lys  
290 295 300

Ser Phe Ala Asp Val Ile Leu Leu Thr Leu Ala Val His Glu Ala Val  
305 310 315 320

Ser Ser Ser Arg Met Met Arg Arg Leu Ser Leu Glu Asn Phe Pro Ile  
325 330 335

Thr Asp His Lys Ala Trp His Met Lys Val Ser Asp Leu Met Val Phe  
340 345 350

Leu Ile Lys Cys Ile Phe Phe Ser Arg Leu Gln Trp Glu Met Phe Leu  
355 360 365

Ser Arg Leu Asn Phe Phe Glu Phe Arg Val Arg Pro Leu Gly Leu Phe  
370 375 380

Glu Val Ser Asn Glu Val Ile Leu Leu Phe Leu Ser Ser Met Ile Thr  
385 390 395 400

Tyr Phe Thr Tyr Val Val Gln  
405

<210> 51  
<211> 363  
<212> FRT  
<213> Drosophila melanogaster

<400> 51

Met Ser Phe Tyr Ala Arg Phe Leu Ser Leu Val Cys Phe Arg Leu Arg  
1 5 10 15

Lys Gln Lys Asp Asn Asn Val Trp Leu Glu Glu Ile Trp Ser Asn Arg  
20 25 30

Ser Arg Trp Lys Trp Ile Ser Val Thr Leu Arg Ile Val Pro Leu Cys  
35 40 45

Ile Tyr Ala Phe Thr Tyr Ala Glu Trp Ile Ser Asn Arg Met Leu Ile  
50 55 60

Thr Glu Lys Phe Leu His Ser Cys Ser Leu Val Val Ser Ile Pro Cys  
65 70 75 80

Tyr Leu Ser Ile Ile His Leu Lys Ile Cys His Gly Pro Glu Val Thr  
85 90 95

Lys Leu Val Asn Gln Tyr Leu His Ile Phe Arg Leu Gly Thr Leu Asp  
100 105 110

Ile Arg Arg Arg Ser Gln Phe Gly Gly Gly Arg Glu Leu Phe Leu Leu  
115 120 125

Ile Leu Ser Val Cys Cys Gln Ile His Glu Tyr Val Phe Ile Leu Val  
130 135 140

Ile Ala Ser Arg Leu Cys Gly Phe Gln His Ile Ile Trp Trp Val Ser  
145 150 155 160



Tyr Thr Tyr Val Phe Ile Ile Cys Asn Ser Ile Met Cys Phe Gly Phe  
165 170 175

Ile Trp His Leu Ser Leu Gly Val Leu Tyr Ala Glu Leu Asn Asp Asn  
180 185 190

Leu Arg Phe Glu Ser Gly Phe Gln Thr Ala Phe Leu Arg Lys Gln Gln  
195 200 205

Arg Ile Arg Val Gln Lys Ser Met Ala Leu Phe Lys Glu Ile Ser Ser  
210 215 220

Val Val Thr Ser Leu Gln Asp Ile Phe Asn Val His Leu Phe Leu Ser  
225 230 235 240

Ala Leu Leu Thr Leu Leu Gln Val Leu Val Val Trp Tyr Lys Met Ile  
245 250 255

Ile Asp Leu Gly Phe Ser Asp Phe Arg Ile Trp Ser Phe Ser Leu Lys  
260 265 270

Asn Leu Ile Gln Thr Leu Leu Pro Val Leu Ala Ile Gln Glu Ala Ala  
275 280 285

Asn Gln Phe Lys Gln Thr Arg Glu Arg Ala Leu Asp Ile Phe Leu Val  
290 295 300

Gly Lys Ser Lys His Trp Met Lys Ser Val Ser Lys Leu Ile Asn Gln  
305 310 315 320

Gly Ile Leu Gln Leu Ile Gly Leu Phe Asn Val Ser Asn Glu Leu Phe  
325 330 335

Leu Ile Ile Val Ser Ala Met Phe Cys Tyr Leu Val Phe Val Thr Gln  
340 345 350

Cys Val Ile Val Tyr Arg Arg Arg Tyr Val Ile  
355 360

<210> 52  
<211> 404  
<212> PRT  
<213> Drosophila melanogaster  
  
<400> 52

Met Asp Phe Thr Ser Asp Tyr Ala His Arg Arg Met Val Lys Phe Leu  
1 5 10 15

Thr Ile Ile Leu Ile Gly Phe Met Thr Val Phe Gly Leu Leu Ala Asn  
20 25 30

Arg Tyr Arg Ala Gly Arg Arg Glu Arg Phe Arg Phe Ser Lys Ala Asn  
35 40 45

Leu Ala Phe Ala Ser Leu Trp Ala Ile Ala Phe Ser Leu Val Tyr Gly  
50 55 60

Arg Gln Ile Tyr Lys Glu Tyr Gln Glu Gly Gln Ile Asn Leu Lys Asp  
65 70 75 80

Ala Thr Thr Leu Tyr Ser Tyr Met Asn Ile Thr Val Ala Val Ile Asn  
85 90 95

Tyr Val Ser Gln Met Ile Ile Ser Asp His Val Ala Lys Val Leu Ser  
100 105 110

Lys Val Pro Phe Phe Asp Thr Leu Lys Glu Phe Arg Leu Asp Ser Arg  
115 120 125

Ser Leu Tyr Ile Ser Ile Val Leu Ala Leu Val Lys Thr Val Ala Phe  
130 135 140

Pro Leu Thr Ile Glu Val Ala Phe Ile Leu Gln Gln Arg Arg Gln His  
145 150 155 160

Pro Glu Met Ser Leu Ile Trp Thr Leu Tyr Arg Leu Phe Pro Leu Ile  
165 170 175

Ile Ser Asn Phe Leu Asn Asn Cys Tyr Phe Gly Ala Met Val Val Val  
180 185 190

Lys Glu Ile Leu Tyr Ala Leu Asn Arg Arg Leu Glu Ala Gln Leu Gln  
195 200 205

Glu Val Asn Leu Leu Gln Arg Lys Asp Gln Leu Lys Leu Tyr Thr Lys  
210 215 220

Tyr Tyr Arg Met Gln Arg Phe Cys Ala Leu Ala Asp Glu Leu Asp Gln  
225 230 235 240

Leu Ala Tyr Arg Tyr Arg Leu Ile Tyr Val His Ser Gly Lys Tyr Leu

245

250

255

Thr Pro Met Ser Leu Ser Met Ile Leu Ser Leu Ile Cys His Leu Leu  
260 265 270

Gly Ile Thr Val Gly Phe Tyr Ser Leu Tyr Tyr Ala Ile Ala Asp Thr  
275 280 285

Leu Ile Met Gly Lys Pro Tyr Asp Gly Leu Gly Ser Leu Ile Asn Leu  
290 295 300

Val Phe Leu Ser Ile Ser Leu Ala Glu Ile Thr Leu Leu Thr His Leu  
305 310 315 320

Cys Asn His Leu Leu Val Ala Thr Arg Arg Ser Ala Val Ile Leu Gln  
325 330 335

Glu Met Asn Leu Gln His Ala Asp Ser Arg Tyr Arg Gln Ala Val His  
340 345 350

Gly Phe Thr Leu Leu Val Thr Val Thr Lys Tyr Gln Ile Lys Pro Leu  
355 360 365

Gly Leu Tyr Glu Leu Asp Met Arg Leu Ile Ser Asn Val Phe Ser Ala  
370 375 380

Val Ala Ser Phe Leu Leu Ile Leu Val Gln Ala Asp Leu Ser Gln Arg  
385 390 395 400

Phe Lys Met Gln

<210> 53

<211> 352

<212> PRT

<213> Drosophila melanogaster

<400> 53

Met Arg Phe Leu Arg Arg Gln Thr Arg Arg Leu Arg Ser Ile Trp Gln  
1 5 10 15

Arg Ser Leu Pro Val Arg Phe Arg Arg Gly Lys Leu His Thr Gln Leu  
20 25 30

Val Thr Ile Cys Leu Tyr Ala Thr Val Phe Leu Asn Ile Leu Tyr Gly  
35 40 45

Val Tyr Leu Gly Arg Phe Ser Phe Arg Arg Lys Lys Phe Val Phe Ser  
50 55 60

Lys Gly Leu Thr Ile Tyr Ser Leu Phe Val Ala Thr Phe Phe Ala Leu  
65 70 75 80

Phe Tyr Ile Trp Asn Ile Tyr Asn Glu Ile Ser Thr Gly Gln Ile Asn  
85 90 95

Leu Arg Asp Thr Ile Gly Ile Tyr Cys Tyr Met Asn Val Cys Val Cys  
100 105 110

Leu Phe Asn Tyr Val Thr Gln Trp Glu Lys Thr Leu Gln Ile Ile Arg  
115 120 125

Phe Gln Asn Ser Val Pro Leu Phe Lys Val Leu Asp Ser Leu Asp Ile  
130 135 140

Ser Ala Met Ile Val Trp Arg Ala Phe Ile Tyr Gly Leu Leu Lys Ile  
145 150 155 160

Val Phe Cys Pro Leu Ile Thr Tyr Ile Thr Leu Ile Leu Tyr His Arg  
165 170 175

Arg Ser Ile Ser Glu Ser Gln Trp Thr Ser Val Thr Thr Thr Lys Thr  
180 185 190

Met Leu Pro Leu Ile Val Ser Asn Gln Ile Asn Asn Cys Phe Phe Gly  
195 200 205

Gly Leu Val Leu Ala Asn Leu Ile Phe Ala Ala Val Asn Arg Lys Leu  
210 215 220

His Gly Ile Val Lys Glu Ala Asn Met Leu Gln Ser Pro Val Gln Met  
225 230 235 240

Asn Leu His Lys Pro Tyr Tyr Arg Met Arg Arg Phe Cys Glu Leu Ala  
245 250 255

Asp Leu Leu Asp Glu Leu Ala Arg Lys Tyr Gly Phe Thr Ala Ser Arg  
260 265 270

Ser Lys Asn Tyr Leu Arg Phe Thr Asp Trp Ser Met Val Leu Ser Met  
275 280 285

Leu Met Asn Leu Leu Gly Ile Thr Met Gly Cys Tyr Asn Gln Tyr Leu  
290 295 300

Ala Ile Ala Asp His Tyr Ile Asn Glu Glu Pro Phe Asp Leu Phe Leu  
305 310 315 320

Ala Ile Val Leu Val Val Phe Leu Ala Val Pro Phe Leu Glu Leu Val  
325 330 335

Met Val Ala Arg Ile Ser Asn Gln Thr Leu Val Glu Val Ile Val Ile  
340 345 350

<210> 54

<211> 160

<212> PRT

<213> Drosophila melanogaster

<400> 54

Ile Glu Arg Phe Val Cys Ala Gln Leu Val His Glu Ala Tyr Lys Gln  
1 5 10 15

Phe Ala Ser Asn Gly Phe Arg Phe Leu Asp Ala Leu Gly Cys Tyr Glu  
20 25 30

His Ser Ala Leu Gly Arg Ala Arg Pro Leu Ser Arg Arg Gly Tyr Ala  
35 40 45

Ile Lys Val Ser Asp His Pro Ala Thr Pro Pro His Tyr His Met Pro  
50 55 60

Pro Pro Lys Gln Pro Pro Ser His Leu Ala Val Gln His Ala Thr Leu  
65 70 75 80

Thr Ser Gly Leu Arg Gln Leu Ser Phe Ser Cys Val Asn Cys Asn Cys  
85 90 95

Ser Arg Cys Cys Trp Ser Leu Pro Met His Phe Arg Tyr Ile Phe Asn  
100 105 110

Ala Ser Leu Cys Asn Cys Gln Arg Gln Gly Tyr Thr Leu Ser Cys Arg  
115 120 125

Arg His Cys Thr Ala Thr Lys Asn Ile Ser Phe Ser Phe Cys His Ile  
130 135 140

Ser Phe Val Phe Leu Leu Lys Tyr Asp Pro Lys Asn Pro Gln Leu Arg  
145 150 155 160

<210> 55  
 <211> 405  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 55

Met Phe Asp Trp Val Gly Leu Leu Leu Lys Val Leu Tyr Tyr Tyr Gly  
 1 5 10 15

Gln Ile Ile Gly Leu Ile Asn Phe Glu Ile Asp Trp Gln Arg Gly Arg  
 20 25 30

Val Val Ala Ala Gln Arg Gly Ile Leu Phe Ala Ile Ala Ile Asn Val  
 35 40 45

Leu Ile Cys Met Val Leu Leu Leu Gln Ile Ser Lys Lys Phe Asn Leu  
 50 55 60

Asp Val Tyr Phe Gly Arg Ala Asn Gln Leu His Gln Tyr Val Ile Ile  
 65 70 75 80

Val Met Val Ser Leu Arg Met Ala Ser Leu Asn Arg Trp Arg Gln Arg  
 85 90 95

Ala Gln Leu Met Arg Leu Val Glu Cys Val Leu Arg Leu Phe Leu Lys  
 100 105 110

Lys Pro His Val Lys Gln Met Ser Arg Trp Ala Ile Leu Val Lys Phe  
 115 120 125

Ser Val Gly Val Val Ser Asn Phe Leu Gln Met Ala Ile Ser Met Glu  
 130 135 140

Ser Leu Asp Arg Leu Gly Phe Asn Glu Phe Val Gly Met Ala Ser Asp  
 145 150 155 160

Phe Trp Met Ser Ala Ile Ile Asn Met Ala Ile Ser Gln His Tyr Leu  
 165 170 175

Val Ile Leu Phe Val Arg Ala Tyr Tyr His Leu Leu Lys Thr Glu Val  
 180 185 190

Arg Gln Ala Ile His Glu Ser Gln Met Leu Ser Glu Ile Tyr Pro Arg  
 195 200 205

Arg Ala Ala Phe Met Thr Lys Cys Cys Tyr Leu Ala Asp Arg Ile Asp  
210 215 220

Asn Ile Ala Lys Leu Gln Asn Gln Leu Gln Ser Ile Val Thr Gln Leu  
225 230 235 240

Asn Gln Val Phe Gly Ile Gln Gly Ile Met Val Tyr Gly Gly Tyr Tyr  
245 250 255

Ile Phe Ser Val Ala Thr Thr Tyr Ile Thr Tyr Ser Leu Ala Ile Asn  
260 265 270

Gly Ile Glu Glu Leu His Leu Ser Val Arg Ala Ala Ala Leu Val Phe  
275 280 285

Ser Trp Phe Leu Phe Tyr Tyr Thr Ser Ala Ile Leu Asn Leu Phe Val  
290 295 300

Met Leu Lys Leu Phe Asp Asp His Lys Glu Met Glu Arg Ile Leu Glu  
305 310 315 320

Glu Arg Thr Leu Phe Thr Ser Ala Leu Asp Val Arg Leu Glu Gln Ser  
325 330 335

Val Ser Phe Tyr Pro Thr Ile Thr Glu Leu Lys Tyr Arg Asp Leu Val  
340 345 350

Leu Ser Gln Phe Glu Ser Ile Gln Leu Gln Leu Ile Arg Asn Pro Leu  
355 360 365

Lys Ile Glu Val Leu Asp Ile Phe Thr Ile Thr Arg Ser Ser Ser Ala  
370 375 380

Ala Met Ile Gly Ser Ile Ile Thr Asn Ser Ile Phe Leu Ile Gln Tyr  
385 390 395 400

Asp Met Glu Tyr Phe  
405

<210> 56

<211> 365

<212> FRT

<213> Drosophila melanogaster

<400> 56

Met Trp Leu Leu Arg Arg Ser Val Gly Lys Ser Gly Asn Arg Pro His  
1 5 10 15

Asp Val Tyr Thr Cys Tyr Arg Leu Thr Ile Phe Met Ala Leu Cys Leu  
20 25 30

Gly Ile Val Pro Tyr Tyr Val Ser Ile Ser Ser Glu Gly Arg Gly Lys  
35 40 45

Leu Thr Ser Ser Tyr Ile Gly Tyr Ile Asn Ile Ile Ile Arg Met Ala  
50 55 60

Ile Tyr Met Val Asn Ser Phe Tyr Gly Ala Val Asn Arg Asp Thr Leu  
65 70 75 80

Met Ser Asn Phe Phe Leu Thr Asp Ile Ser Asn Val Ile Asp Ala Leu  
85 90 95

Gln Lys Ile Asn Gly Met Leu Gly Ile Phe Ala Ile Leu Leu Ile Ser  
100 105 110

Leu Leu Asn Arg Lys Glu Leu Leu Lys Leu Leu Ala Thr Phe Asp Arg  
115 120 125

Leu Glu Thr Glu Ala Phe Pro Arg Val Leu Lys Asn Leu Ala His Gln  
130 135 140

Trp Asp Thr Arg Ser Leu Lys Ala Val Asn Gln Lys Gln Arg Ser Leu  
145 150 155 160

Gln Cys Leu Asp Ser Phe Ser Met Tyr Thr Ile Val Thr Lys Asp Pro  
165 170 175

Ala Glu Ile Ile Gln Glu Ser Met Glu Ile His His Leu Ile Cys Glu  
180 185 190

Ala Ala Ala Thr Ala Asn Lys Tyr Phe Thr Tyr Gln Leu Leu Thr Ile  
195 200 205

Ile Ser Ile Ala Phe Leu Ile Ile Val Phe Asp Ala Tyr Tyr Val Leu  
210 215 220

Glu Thr Leu Leu Gly Lys Ser Lys Arg Glu Ser Lys Phe Lys Thr Val  
225 230 235 240

Glu Phe Val Thr Phe Phe Ser Cys Gln Met Ile Leu Tyr Leu Ile Ala  
245 250 255



Ile Ile Ser Ile Val Glu Gly Ser Asn Arg Ala Ile Lys Lys Ser Glu  
260 265 270

Lys Thr Gly Gly Ile Val His Ser Leu Leu Asn Lys Thr Lys Ser Ala  
275 280 285

Glu Val Lys Glu Lys Leu Gln Gln Phe Ser Met Gln Leu Met His Leu  
290 295 300

Lys Ile Asn Phe Thr Ala Ala Gly Leu Phe Asn Ile Asp Arg Thr Leu  
305 310 315 320

Tyr Phe Thr Ile Ser Gly Ala Leu Thr Thr Tyr Leu Ile Ile Leu Leu  
325 330 335

Gln Phe Thr Ser Asn Ser Pro Asn Asn Gly Tyr Gly Asn Gly Ser Ser  
340 345 350

Cys Cys Glu Thr Phe Asn Asn Met Thr Asn His Thr Leu  
355 360 365

<210> 57  
<211> 450  
<212> PRT  
<213> Drosophila melanogaster

<400> 57

Met Lys Gly Pro Asn Leu Asn Phe Arg Lys Thr Pro Ser Lys Asp Asn  
1 5 10 15

Gly Val Lys Gln Val Glu Ser Leu Ala Arg Pro Glu Thr Pro Pro Pro  
20 25 30

Lys Phe Val Glu Asp Ser Asn Leu Glu Phe Asn Val Leu Ala Ser Glu  
35 40 45

Lys Leu Pro Asn Tyr Thr Asn Leu Asp Leu Phe His Arg Ala Val Phe  
50 55 60

Pro Phe Met Phe Leu Ala Gln Cys Val Ala Ile Met Pro Leu Val Gly  
65 70 75 80

Ile Arg Glu Ser Asn Pro Arg Arg Val Arg Phe Ala Tyr Lys Ser Ile  
85 90 95

Pro Met Phe Val Thr Leu Ile Phe Met Ile Ala Thr Ser Ile Leu Phe

100

105

110

Leu Ser Met Phe Thr His Leu Leu Lys Ile Gly Ile Thr Ala Lys Asn  
115 120 125

Phe Val Gly Leu Val Phe Phe Gly Cys Val Leu Ser Ala Tyr Val Val  
130 135 140

Phe Ile Arg Leu Ala Lys Lys Trp Pro Ala Val Val Arg Ile Trp Thr  
145 150 155 160

Arg Thr Glu Ile Pro Phe Thr Lys Pro Pro Tyr Glu Ile Pro Lys Arg  
165 170 175

Asn Leu Ser Arg Arg Val Gln Leu Ala Ala Leu Ala Ile Ile Gly Leu  
180 185 190

Ser Leu Gly Glu His Ala Leu Tyr Gln Val Ser Ala Ile Leu Ser Tyr  
195 200 205

Thr Arg Arg Ile Gln Met Cys Ala Asn Ile Thr Thr Val Pro Ser Phe  
210 215 220

Asn Asn Tyr Met Gln Thr Asn Tyr Asp Tyr Val Phe Gln Leu Leu Pro  
225 230 235 240

Tyr Ser Pro Ile Ile Ala Val Leu Ile Leu Ala Thr Cys Thr Phe Val  
245 250 255

Trp Asn Tyr Met Asp Leu Phe Ile Met Met Ile Ser Lys Gly Leu Ser  
260 265 270

Tyr Arg Phe Glu Gln Ile Thr Thr Arg Ile Arg Lys Leu Glu His Glu  
275 280 285

Glu Val Cys Glu Ser Val Phe Ile Gln Ile Arg Glu His Tyr Val Lys  
290 295 300

Met Cys Glu Leu Leu Glu Phe Val Asp Ser Ala Met Ser Ser Leu Ile  
305 310 315 320

Leu Leu Ser Cys Val Asn Asn Leu Tyr Phe Val Cys Tyr Gln Leu Leu  
325 330 335

Asn Val Phe Asn Lys Leu Arg Trp Pro Ile Asn Tyr Ile Tyr Phe Trp  
340 345 350

Tyr Ser Leu Leu Tyr Leu Ile Gly Arg Thr Ala Phe Val Phe Leu Thr  
355 360 365

Ala Ala Asp Ile Asn Glu Glu Ser Lys Arg Gly Leu Gly Val Leu Arg  
370 375 380

Arg Val Ser Ser Arg Ser Trp Cys Val Glu Val Glu Arg Leu Ile Phe  
385 390 395 400

Gln Met Thr Thr Gln Thr Val Ala Leu Ser Gly Lys Lys Phe Tyr Phe  
405 410 415

Leu Thr Arg Arg Leu Leu Phe Gly Met Ala Gly Thr Ile Val Thr Tyr  
420 425 430

Glu Leu Val Leu Leu Gln Phe Asp Glu Pro Asn Arg Arg Lys Gly Leu  
435 440 445

Gln Pro  
450

<210> 58  
<211> 28  
<212> PRT  
<213> Drosophila melanogaster

<400> 58

Ile Tyr Ile Leu Ser Leu Tyr Ile Phe Phe Gln Phe Ile Ser Asn Val  
1 5 10 15

Ser Leu Ile Val Val Leu Lys Leu Phe Arg Asp Ile  
20 25

<210> 59  
<211> 444  
<212> PRT  
<213> Drosophila melanogaster

<400> 59

Met Arg Gln Leu Lys Gly Arg Asn Arg Cys Asn Arg Ala Val Arg His  
1 5 10 15

Leu Lys Val Gln Gly Lys Met Trp Leu Lys Asn Leu Lys Ser Gly Leu  
20 25 30

Glu Gln Ile Arg Glu Ser Gln Val Arg Gly Thr Arg Lys Asn Phe Leu

His Asp Gly Ser Phe His Glu Ala Val Ala Pro Val Leu Ala Val Ala  
50 55 60

Gln Cys Phe Cys Leu Met Pro Val Cys Gly Ile Ser Ala Pro Thr Tyr  
65 70 75 80

Arg Gly Leu Ser Phe Asn Arg Arg Ser Trp Arg Phe Trp Tyr Ser Ser  
85 90 95

Leu Tyr Leu Cys Ser Thr Ser Val Asp Leu Ala Phe Ser Ile Arg Arg  
100 105 110

Val Ala His Ser Val Leu Asp Val Arg Ser Val Glu Pro Ile Val Phe  
115 120 125

His Val Ser Ile Leu Ile Ala Ser Trp Gln Phe Leu Asn Leu Ala Gln  
130 135 140

Leu Trp Pro Gly Leu Met Arg His Trp Ala Ala Val Glu Arg Arg Leu  
145 150 155 160

Pro Gly Tyr Thr Cys Cys Leu Gln Arg Ala Arg Pro Ala Arg Arg Leu  
165 170 175

Lys Leu Val Ala Phe Val Leu Leu Val Val Ser Leu Met Glu His Leu  
180 185 190

Leu Ser Ile Ile Ser Val Val Tyr Tyr Asp Phe Cys Pro Arg Arg Ser  
195 200 205

Asp Pro Val Glu Ser Tyr Leu Leu Gly Ala Ser Ala Gln Leu Phe Glu  
210 215 220

Val Phe Pro Tyr Ser Asn Trp Leu Ala Trp Leu Gly Lys Ile Gln Asn  
225 230 235 240

Val Leu Leu Thr Phe Gly Trp Ser Tyr Met Asp Ile Phe Leu Met Met  
245 250 255

Leu Gly Met Gly Leu Ser Glu Met Leu Ala Arg Leu Asn Arg Ser Leu  
260 265 270

Glu Gln Gln Val Arg Gln Pro Met Pro Glu Ala Tyr Trp Thr Trp Ser  
275 280 285

Arg Thr Leu Tyr Arg Ser Ile Val Glu Leu Ile Arg Glu Val Asp Asp  
290 295 300

Ala Val Ser Gly Ile Met Leu Ile Ser Phe Gly Ser Asn Leu Tyr Phe  
305 310 315 320

Ile Cys Leu Gln Leu Leu Lys Ser Ile Asn Thr Met Pro Ser Ser Ala  
325 330 335

His Ala Val Tyr Phe Tyr Phe Ser Leu Leu Phe Leu Leu Ser Arg Ser  
340 345 350

Thr Ala Val Leu Leu Phe Val Ser Ala Ile Asn Asp Gln Ala Arg Glu  
355 360 365

Pro Leu Arg Leu Leu Arg Leu Val Pro Leu Lys Gly Tyr His Pro Glu  
370 375 380

Val Phe Arg Phe Ala Ala Glu Leu Ala Ser Asp Gln Val Ala Leu Thr  
385 390 395 400

Gly Leu Lys Phe Phe Asn Val Thr Arg Lys Leu Phe Leu Ala Met Ala  
405 410 415

Gly Thr Val Ala Thr Tyr Glu Leu Val Leu Ile Gln Phe His Glu Asp  
420 425 430

Lys Lys Thr Trp Asp Cys Ser Pro Phe Asn Leu Asp  
435 440

<210> 60  
<211> 25  
<212> PRT  
<213> Artificial sequence

<220>  
<223> motif

<220>  
<221> MISC\_FEATURE  
<222> (2)..(2)  
<223> X = L OR F

<220>  
<221> MISC\_FEATURE  
<222> (4)..(17)  
<223> X=ANY AMINO ACID

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<220>
<221> MISC_FEATURE
<222> (21)..(21)
<223> X = V OR I

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> X = V OR I OR L

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<400> 60

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```

Gly Xaa Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1          5          10          15

```

```

Xaa Thr Tyr Leu Xaa Leu Xaa Gln Phe
                20          25

```

```

<210> 61
<211> 33
<212> PRT
<213> Drosophila melanogaster

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```

<400> 61

```

```

Phe Arg Phe Gln Leu Cys Gly Leu Phe Ser Ile Asn His Asn Met Gly
1          5          10          15

```

```

Phe Gln Met Ile Ile Thr Ser Phe Leu Tyr Leu Val Tyr Leu Leu Gln
                20          25          30

```

```

Phe

```

```

<210> 62
<211> 33
<212> PRT
<213> Drosophila melanogaster

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```

<400> 62

```

```

Leu Gln Leu Trp Ser Cys Gly Leu Phe Gln Ala Asn Arg Ser Met Trp
1          5          10          15

```

```

Phe Ala Met Ile Ser Ser Val Leu Tyr Tyr Ile Leu Val Leu Leu Gln
                20          25          30

```

```

Phe

```

<210> 63  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 63

Ser Thr Tyr Lys Val Cys Gly Leu Phe Ile Phe Asn Lys Gln Thr Ser  
 1 5 10 15

Leu Ala Tyr Phe Phe Tyr Val Leu Val Gln Val Leu Val Leu Val Gln  
 20 25 30

Phe

<210> 64  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 64

His Glu Phe Tyr Val Met Gly Leu Phe Lys Met Glu Arg Gly Arg Leu  
 1 5 10 15

Ile Ala Met Leu Ser Ser Val Ile Thr His Thr Met Val Leu Val Gln  
 20 25 30

Trp

<210> 65  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 65

Leu Glu Ile Lys Val Leu Gly Phe Phe His Leu Asn Asn Glu Phe Ile  
 1 5 10 15

Leu Leu Ile Leu Ser Ala Ile Ile Ser Tyr Leu Phe Ile Leu Ile Gln  
 20 25 30

Phe

<210> 66  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

10081816.022202

<400> 66

Pro Ile Met Asn Leu Asp Gly Tyr Ala Asn Ile Asn Arg Glu Leu Ile  
1 5 10 15

Thr Thr Asn Ile Ser Phe Met Ala Thr Tyr Leu Val Val Leu Leu Gln  
20 25 30

Phe

<210> 67

<211> 33

<212> PRT

<213> Drosophila melanogaster

<400> 67

Ser Thr Ile Asn Cys Gly Gly Phe Phe Asp Val Asn Arg Thr Leu Phe  
1 5 10 15

Lys Gly Leu Leu Thr Thr Met Val Thr Tyr Leu Val Val Leu Leu Gln  
20 25 30

Phe

<210> 68

<211> 33

<212> PRT

<213> Drosophila melanogaster

<400> 68

Leu Ala Ile Asn Ala Glu Gly Phe Met Ser Thr Asp Asn Ser Leu Leu  
1 5 10 15

Met Ser Ile Leu Ala Ala Lys Val Thr Tyr Leu Ile Val Leu Met Gln  
20 25 30

Phe

<210> 69

<211> 33

<212> PRT

<213> Drosophila melanogaster

<400> 69

Ile Asn Phe Thr Ala Ala Gly Leu Phe Asn Ile Asp Arg Thr Leu Tyr



1 5 10 15

Phe Thr Ile Ser Gly Ala Leu Thr Thr Tyr Leu Ile Ile Leu Leu Gln  
20 25 30

Phe

<210> 70  
<211> 33  
<212> PRT  
<213> Drosophila melanogaster

<400> 70

Leu His Phe Ser Ala Ala Gly Phe Phe Asn Val Asp Cys Thr Leu Leu  
1 5 10 15

Tyr Thr Ile Val Gly Ala Thr Thr Thr Tyr Leu Ile Ile Leu Ile Gln  
20 25 30

Phe

<210> 71  
<211> 33  
<212> PRT  
<213> Drosophila melanogaster

<400> 71

Ala Asp Phe Ser Ala Cys Gly Leu Cys Arg Val Asn Arg Thr Ile Leu  
1 5 10 15

Thr Ser Phe Ala Ser Ala Ile Ala Thr Tyr Leu Val Ile Leu Ile Gln  
20 25 30

Phe

<210> 72  
<211> 32  
<212> PRT  
<213> Drosophila melanogaster

<400> 72

Phe Met Thr Cys Ala Ala Ser Phe Met Ser Asn Arg Val Thr Ile Gln  
1 5 10 15

Val Cys Leu Lys Ala Ile Phe Thr Tyr Met Val Ile Leu Val Gln Phe

20

25

30

<210> 73  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 73

Val Ala Leu Thr Gly Met Lys Phe Phe His Leu Thr Arg Lys Leu Val  
 1 5 10 15

Leu Ser Val Ala Gly Thr Ile Val Thr Tyr Glu Leu Val Leu Ile Gln  
 20 25 30

Phe

<210> 74  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 74

Val Ala Leu Thr Gly Leu Lys Phe Phe Asn Val Thr Arg Lys Leu Phe  
 1 5 10 15

Leu Ala Met Ala Gly Thr Val Ala Thr Tyr Glu Leu Val Leu Ile Gln  
 20 25 30

Phe

<210> 75  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 75

Met Ser Ile Ser Gly Ala Lys Phe Phe Thr Val Ser Leu Asp Leu Phe  
 1 5 10 15

Ala Ser Val Leu Gly Ala Val Val Thr Tyr Phe Met Val Leu Val Gln  
 20 25 30

Leu

<210> 76

<211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 76

Val Glu Leu Asn Ala Met Gly Tyr Leu Ser Ile Ser Leu Asp Thr Phe  
 1 5 10 15

Lys Gln Leu Met Ser Val Ser Tyr Arg Val Ile Thr Met Leu Met Gln  
 20 25 30

Met

<210> 77  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 77

Ile Thr Leu Thr Ala Gly Gly Val Phe Pro Ile Ser Met Gln Thr Asn  
 1 5 10 15

Leu Ala Met Val Lys Leu Ala Phe Ser Val Val Thr Val Ile Lys Gln  
 20 25 30

Phe

<210> 78  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 78

Ile Ile Leu Thr Ala Gly Gly Val Phe Pro Ile Ser Met Gln Thr Asn  
 1 5 10 15

Leu Asn Met Val Lys Leu Ala Phe Thr Val Val Thr Ile Val Lys Gln  
 20 25 30

Phe

<210> 79  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 79

Ile Val Phe Ile Ala Gly Gly Ile Phe Gln Ile Ser Met Ser Ser Asn  
1 5 10 15

Ile Ser Val Ala Lys Phe Ala Phe Ser Val Ile Thr Ile Thr Lys Gln  
20 25 30

Met

<210> 80

<211> 33

<212> PRT

<213> Drosophila melanogaster

<400> 80

Ile Ile Phe Ile Ala Gly Gly Ile Phe Pro Ile Ser Met Asn Ser Asn  
1 5 10 15

Ile Thr Val Ala Lys Phe Ala Phe Ser Ile Ile Thr Ile Val Arg Gln  
20 25 30

Met

<210> 81

<211> 33

<212> PRT

<213> Drosophila melanogaster

<400> 81

Ile Gln Phe Thr Ala Gly Ser Thr Phe Pro Ile Ser Val Gln Ser Asn  
1 5 10 15

Ile Ala Val Ala Lys Phe Ala Phe Thr Ile Ile Thr Ile Val Asn Gln  
20 25 30

Met

<210> 82

<211> 33

<212> PRT

<213> Drosophila melanogaster

<400> 82

Ile Ala Phe Thr Ala Gly Ser Ile Phe Pro Ile Ser Thr Gly Ser Asn  
1 5 10 15

Ile Lys Val Ala Lys Leu Ala Phe Ser Val Val Thr Phe Val Asn Gln  
20 25 30

Leu

<210> 83  
<211> 33  
<212> PRT  
<213> Drosophila melanogaster

<400> 83

Ile Leu Phe Thr Ala Gly Gly Ile Phe Pro Ile Cys Leu Asn Thr Asn  
1 5 10 15

Ile Lys Met Ala Lys Phe Ala Phe Ser Val Val Thr Ile Val Asn Glu  
20 25 30

Met

<210> 84  
<211> 33  
<212> PRT  
<213> Drosophila melanogaster

<400> 84

Ile Thr Leu Thr Ala Met Lys Leu Phe Pro Ile Asn Leu Ala Thr Tyr  
1 5 10 15

Phe Ser Ile Ala Lys Phe Ser Phe Ser Leu Tyr Thr Leu Ile Lys Gly  
20 25 30

Met

<210> 85  
<211> 33  
<212> PRT  
<213> Drosophila melanogaster

<400> 85

Ile Arg Ile Asp Cys Leu Gly Leu Thr Ile Leu Asp Cys Ser Leu Leu  
1 5 10 15

Thr Arg Met Ala Cys Ser Val Gly Thr Tyr Met Ile Tyr Ser Ile Gln  
20 25 30

Phe

<210> 86  
<211> 33  
<212> PRT  
<213> Drosophila melanogaster

<400> 86

Phe Gln Phe Asn Gly Val Gly Leu Phe Ala Leu Asp Tyr Thr Phe Ile  
1 5 10 15

Phe Ser Thr Val Ser Ala Ala Thr Ser Tyr Leu Ile Val Leu Leu Gln  
20 25 30

Phe

<210> 87  
<211> 33  
<212> PRT  
<213> Drosophila melanogaster

<400> 87

Val Asp Phe Ser Ala Cys Gly Phe Phe Thr Leu Asp Met Glu Thr Leu  
1 5 10 15

Tyr Gly Val Ser Gly Gly Ile Thr Ser Tyr Leu Ile Ile Leu Ile Gln  
20 25 30

Phe

<210> 88  
<211> 32  
<212> PRT  
<213> Drosophila melanogaster

<400> 88

Pro Pro Met Leu Cys Gly Leu Leu His Leu Asp Arg Arg Leu Val Tyr  
1 5 10 15

Leu Ile Ala Val Thr Ala Phe Ser Tyr Phe Ile Thr Leu Val Gln Phe  
20 25 30

<210> 89  
<211> 33

<212> PRT  
 <213> Drosophila melanogaster  
 <400> 89

Tyr Gln Ile Lys Pro Leu Gly Leu Tyr Glu Leu Asp Met Arg Leu Ile  
 1 5 10 15

Ser Asn Val Phe Ser Ala Val Ala Ser Phe Leu Leu Ile Leu Val Gln  
 20 25 30

Ala

<210> 90  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 90

Ile Gln Phe Thr Ser Gly Leu Asp Val Val Leu Ser Arg Lys Val Ile  
 1 5 10 15

Gly Leu Phe Thr Ser Ile Leu Val Asn Tyr Leu Leu Ile Leu Ile Gln  
 20 25 30

Phe

<210> 91  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 91

Gln Pro Leu Glu Ala Cys Gly Ile Val Thr Leu Asp Thr Arg Ser Leu  
 1 5 10 15

Gly Gly Phe Ile Gly Val Leu Met Ala Ile Val Ile Phe Leu Ile Gln  
 20 25 30

Ile

<210> 92  
 <211> 31  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 92

Phe Arg Ile Thr Gly Tyr Phe Phe Glu Ala Asn Met Glu Ala Phe Ser  
1 5 10 15

Ser Ile Val Arg Thr Ala Met Ser Tyr Ile Thr Met Leu Arg Ser  
20 25 30

<210> 93

<211> 31

<212> PRT

<213> Drosophila melanogaster

<400> 93

Cys Gln Met Lys Gly Tyr Phe Phe Glu Ala Ser Met Ala Thr Phe Ser  
1 5 10 15

Thr Ile Val Arg Ser Ala Val Ser Tyr Ile Met Met Leu Arg Ser  
20 25 30

<210> 94

<211> 31

<212> PRT

<213> Drosophila melanogaster

<400> 94

Met Lys Met Arg Ala Leu Leu Val Asp Leu Asn Leu Arg Thr Phe Ile  
1 5 10 15

Asp Ile Gly Arg Gly Ala Tyr Ser Tyr Phe Asn Leu Leu Arg Ser  
20 25 30

<210> 95

<211> 31

<212> PRT

<213> Drosophila melanogaster

<400> 95

Ala Lys Ile Phe Gly Phe Met Phe Val Val Asp Leu Pro Leu Leu Leu  
1 5 10 15

Trp Val Ile Arg Thr Ala Gly Ser Phe Leu Ala Met Leu Arg Thr  
20 25 30

<210> 96

<211> 32

<212> PRT

<213> Drosophila melanogaster

<400> 96



Leu Ala Ser Leu Val Gly Gly Thr Tyr Pro Met Asn Leu Lys Met Leu  
1 5 10 15

Gln Ser Leu Leu Asn Ala Ile Tyr Ser Phe Phe Thr Leu Leu Arg Arg  
20 25 30

<210> 97

<211> 32

<212> PRT

<213> Drosophila melanogaster

<400> 97

Asn Glu Ile Arg Val Gly Asn Val Tyr Pro Met Thr Leu Ala Met Phe  
1 5 10 15

Gln Ser Leu Leu Asn Ala Ser Tyr Ser Tyr Phe Thr Met Leu Arg Gly  
20 25 30

<210> 98

<211> 32

<212> PRT

<213> Drosophila melanogaster

<400> 98

Ala Ala Ile Leu Leu Gly Asn Ile Arg Pro Ile Thr Leu Glu Leu Phe  
1 5 10 15

Gln Asn Leu Leu Asn Thr Thr Tyr Thr Phe Phe Thr Val Leu Lys Arg  
20 25 30

<210> 99

<211> 32

<212> PRT

<213> Drosophila melanogaster

<400> 99

Gln Leu Leu Leu Ala Gly Asn Leu Val Pro Ile His Leu Ser Thr Tyr  
1 5 10 15

Val Ala Cys Trp Lys Gly Ala Tyr Ser Phe Phe Thr Leu Met Ala Asp  
20 25 30

<210> 100

<211> 32

<212> PRT

<213> Drosophila melanogaster

<400> 100

Ser Leu Ile Tyr Ala Gly Asn Tyr Ile Ala Leu Ser Leu Glu Thr Phe

1 5 10 15

Glu Gln Val Met Arg Phe Thr Tyr Ser Val Phe Thr Leu Leu Leu Arg  
20 25 30

<210> 101

<211> 32

<212> PRT

<213> Drosophila melanogaster

<400> 101

Val Asn Ile Lys Ala Gly Gly Ile Val Gly Ile Asp Met Ser Ala Phe  
1 5 10 15

Phe Ala Thr Val Arg Met Ala Tyr Ser Phe Tyr Thr Leu Ala Leu Ser  
20 25 30

<210> 102

<211> 32

<212> PRT

<213> Drosophila melanogaster

<400> 102

Val Gln Ile Lys Ala Gly Gly Met Ile Gly Ile Gly Met Asn Ala Phe  
1 5 10 15

Phe Ala Thr Val Arg Leu Ala Tyr Ser Phe Phe Thr Leu Ala Met Ser  
20 25 30

<210> 103

<211> 32

<212> PRT

<213> Drosophila melanogaster

<400> 103

Trp Ile Ile Lys Ala Gly Gly Leu Ile Glu Leu Asn Leu Asn Ala Phe  
1 5 10 15

Phe Ala Thr Leu Lys Met Ala Tyr Ser Leu Phe Ala Val Val His Arg  
20 25 30

<210> 104

<211> 32

<212> PRT

<213> Drosophila melanogaster

<400> 104

Ser Thr Ala Val Ala Gly Gly Met Met Arg Ile His Leu Asp Thr Phe  
1 5 10 15

Phe Ser Thr Leu Lys Gly Ala Tyr Ser Leu Phe Thr Ile Ile Ile Arg  
20 25 30

<210> 105  
<211> 32  
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<400> 105

Val Thr Ile Arg Ala Gly Asn Ser Phe Ala Val Gly Leu Pro Ile Phe  
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Val Lys Thr Ile Asn Asn Ala Tyr Ser Phe Leu Ala Leu Leu Asn  
20 25 30

<210> 106  
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<400> 106

Val Lys Val Arg Ala Gly Val Phe Phe Glu Ile Gly Leu Pro Ile Phe  
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Val Lys Thr Ile Asn Asn Ala Tyr Ser Phe Phe Ala Leu Leu Lys  
20 25 30

<210> 107  
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<212> PRT  
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<400> 107

Val Thr Leu Lys Ala Gly Gly Phe Phe His Ile Gly Leu Pro Leu Phe  
1 5 10 15

Thr Lys Val Val Phe Ser Thr Leu Glu Asn Pro Cys Ile Ser Tyr Leu  
20 25 30

Tyr

<210> 108  
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<400> 108

Val Ser Met Ala Val Pro Phe Phe Ser Pro Ser Leu Ala Thr Phe Ala  
1 5 10 15

Ala Ile Leu Gln Thr Ser Gly Ser Ile Ile Ala Leu Val Lys Ser Phe  
20 25 30

<210> 109

<211> 33

<212> PRT

<213> Drosophila melanogaster

<400> 109

Leu Met Tyr Val Ala Glu Pro Phe Leu Pro Phe Thr Leu Gly Thr Tyr  
1 5 10 15

Met Leu Val Leu Lys Asn Cys Tyr Arg Leu Leu Ala Leu Met Gln Glu  
20 25 30

Ser

<210> 110

<211> 33

<212> PRT

<213> Drosophila melanogaster

<400> 110

Phe Phe Ile Thr Gly Leu Asn Tyr Phe Arg Val Ser Leu Thr Ala Val  
1 5 10 15

Leu Lys Ile Ile Gln Gly Ala Phe Ser Tyr Phe Thr Phe Leu Asn Ser  
20 25 30

Met

<210> 111

<211> 33

<212> PRT

<213> Drosophila melanogaster

<400> 111

Gln Gln Leu Gly Ala Phe Gly Leu Ile Gln Val Asn Met Val His Phe  
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Thr Glu Ile Met Gln Leu Ala Tyr Arg Leu Phe Thr Phe Leu Lys Ser  
20 25 30

His

<210> 112  
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<212> PRT  
<213> Drosophila melanogaster

<400> 112

Val His Val Thr Ala Gly Lys Phe Tyr Val Met Asp Val Asn Arg Leu  
1 5 10 15

Arg Ser Val Ile Thr Gln Ala Phe Ser Phe Leu Thr Leu Leu Gln Lys  
20 25 30

Leu

<210> 113  
<211> 33  
<212> PRT  
<213> Drosophila melanogaster

<400> 113

His Asn Ile Gln Ile Leu Gly Val Met Ser Leu Ser Val Arg Thr Ala  
1 5 10 15

Leu Gln Ile Val Lys Leu Ile Tyr Ser Val Ser Met Met Met Met Asn  
20 25 30

Arg

<210> 114  
<211> 33  
<212> PRT  
<213> Drosophila melanogaster

<400> 114

Lys Arg Val Val Leu Leu Asn Val Phe Thr Phe Asp Arg Lys Leu Thr  
1 5 10 15

Leu Thr Leu Leu Ala Lys Ser Thr Leu Tyr Thr Ile Cys Cys Leu Gln  
20 25 30

Asn

<210> 115  
 <211> 33  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 115

Arg Gln His Val Val Cys Gly Val Ile Asn Leu Asp Leu Lys Phe Leu  
 1 5 10 15

Thr Thr Leu Leu Val Ala Ser Ala Asp Phe Phe Ile Phe Leu Leu Gln  
 20 25 30

Tyr

<210> 116  
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 <212> PRT  
 <213> Drosophila melanogaster

<400> 116

Thr Val Leu Gly Ala Tyr Phe Phe Glu Leu Gly Arg Pro Leu Leu Val  
 1 5 10 15

Trp Val Ser Ile Phe Leu Phe Ile Val Leu Leu Phe  
 20 25